MADE WITH CREATIVE COMMONS



creative commons

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PAUL STACEY AND SARAH HINCHLIFF PEARSON

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Made With Creative Commons
by Paul Stacey & Sarah Hinchliff Pearson

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"I don't know a whole lot about non-fiction journalism. . . The way that I think about these things, and in terms of what I can do is. . . essays like this are occasions to watch somebody reasonably bright but also reasonably average pay far closer attention and think at far more length about all sorts of different stuff than most of us have a chance to in our daily lives."

- DAVID FOSTER WALLACE

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FOREWORD

Three years ago, just after I was hired as CEO of Creative Commons, I met with Cory Doctorow in the hotel bar of Toronto's Gladstone Hotel. As one of CC's most well-known proponents—one who has also had a successful career as a writer who shares his work using CC—I told him I thought CC had a role in defining and advancing open business models. He kindly disagreed, and called the pursuit of viable business models through CC "a red herring."

He was, in a way, completely correct—those who make things with Creative Commons have ulterior motives, as Paul Stacey explains in this book: "Regardless of legal status, they all have a social mission. Their primary reason for being is to make the world a better place, not to profit. Money is a means to a social end, not the end itself."

In the case study about Cory Doctorow, Sarah Hinchliff Pearson cites Cory's words from his book *Information Doesn't Want to Be Free:* "Entering the arts because you want to get rich is like buying lottery tickets because you want to get rich. It might work, but it almost certainly won't. Though, of course, someone always wins the lottery."

Today, copyright is like a lottery ticket—everyone has one, and almost nobody wins. What they don't tell you is that if you choose to share your work, the returns can be significant and long-lasting. This book is filled with stories of those who take much greater risks than the two dollars we pay for a lottery ticket, and instead reap the rewards that come from pursuing their passions and living their values.

So it's not about the money. Also: it is. Finding the means to continue to create and share often requires some amount of income. Max Temkin of Cards Against Humanity says it best in their case study: "We don't make jokes and games to make money—we make money so we can make more jokes and games."

Creative Commons' focus is on building a vibrant, usable commons, powered by collaboration and gratitude. Enabling communities of collaboration is at the heart of our strategy. With that in mind, Creative Commons began this book project. Led by Paul and Sarah, the project set out to define and advance the best open business models. Paul and Sarah were the ideal authors to write **Made with Creative Commons**.

Paul dreams of a future where new models of creativity and innovation overpower the inequality and scarcity that today define the worst parts of capitalism. He is driven by the power of human connections between communities of creators. He takes a longer view than most, and it's made him a better educator, an insightful researcher, and also a skilled gardener. He has a calm, cool voice that conveys a passion that inspires his colleagues and community.

Sarah is the best kind of lawyer—a true advocate who believes in the good of people, and the power of collective acts to change the world. Over the past year I've seen Sarah struggle with the heartbreak that comes from investing so much into a political campaign that didn't end as she'd hoped. Today, she's more determined than ever to live with her values right out on her sleeve. I can always count on Sarah to push Creative Commons to focus on our impact—to make the main thing *the main thing*. She's practical, detail-oriented, and clever. There's no one on my team that I enjoy debating more.

As coauthors, Paul and Sarah complement each other perfectly. They researched, analyzed, argued, and worked as a team, sometimes together and sometimes independently. They dove into the research and writing with passion and curiosity, and a deep respect for what goes into building the commons and sharing with the world. They remained open to new ideas, including the possibility that their initial theories would need refinement or might be completely wrong. That's courageous, and it has made for a better book that is insightful, honest, and useful.

From the beginning, CC wanted to develop this project with the principles and values of open collaboration. The book was funded, developed, researched, and written in the open. It is being shared openly under a CC BY-SA license for anyone to use, remix, or adapt with attribution. It is, in itself, an example of an open business model.

For 31 days in August of 2015, Sarah took point to organize and execute a Kickstarter campaign to generate the core funding for the book. The remainder was provided by CC's generous donors and supporters. In the end, it became one of the most successful book projects on Kickstarter, smashing through two stretch goals and engaging over 1,600 donors—the majority of them new supporters of Creative Commons.

Paul and Sarah worked openly throughout the project, publishing the plans, drafts, case studies, and analysis, early and often, and they engaged communities all over the world to help write this book. As their opinions diverged and their interests came into focus, they divided their voices and decided to keep them separate in the final product. Working in this way requires both humility and self-confidence, and without question it has made *Made with Creative Commons* a better project.

Those who work and share in the commons are not typical creators. They are part of something greater than themselves, and what they offer us all is a profound gift. What they receive in return is gratitude and a community.

Jonathan Mann, who is profiled in this book, writes a song a day. When I reached out to ask him to write a song for our Kickstarter (and to offer himself up as a Kickstarter benefit), he agreed immediately. Why would he agree to do that? Because the commons has collaboration at its core, and community as a key value, and because the CC licenses have helped so many to share in the ways that they choose with a global audience.

Sarah writes, "Endeavors that are **Made with Creative Commons** thrive when community is built around what they do. This may mean a community collaborating together to create something new, or it may simply be a collection of like-minded people who get to know each other and rally around common interests or beliefs. To a certain extent, simply being **Made with Creative Commons** automatically brings with it some element of community, by helping connect you to like-minded others who recognize and are drawn to the values symbolized by using CC." Amanda Palmer, the other musician profiled in the book, would surely add this from her case study: "There is no more satisfying end goal than having someone tell you that what you do is genuinely of value to them."

This is not a typical business book. For those looking for a recipe or a roadmap, you might be disappointed. But for those looking to pursue a social end, to build something great through collaboration, or to join a powerful and growing global community, they're sure to be satisfied. *Made with Creative Commons* offers a world-changing set of clearly articulated values and principles, some essential tools for exploring your own business opportunities, and two dozen doses of pure inspiration.

In a 1996 *Stanford Law Review* article "*The Zones of Cyberspace*", CC founder Lawrence Lessig wrote, "Cyberspace is a place. People live there. They experience all the sorts of things that they experience in real space, there. For

some, they experience more. They experience this not as isolated individuals, playing some high tech computer game; they experience it in groups, in communities, among strangers, among people they come to know, and sometimes like."

I'm incredibly proud that Creative Commons is able to publish this book for the many communities that we have come to know and like. I'm grateful to Paul and Sarah for their creativity and insights, and to the global communities that have helped us bring it to you. As CC board member Johnathan Nightingale often says, "It's all made of people."

That's the true value of things that are **Made with Creative Commons.**

Ryan Merkley
CEO, Creative Commons

INTRODUCTION

This book shows the world how sharing can be good for business—but with a twist.

We began the project intending to explore how creators, organizations, and businesses make money to sustain what they do when they share their work using Creative Commons licenses. Our goal was not to identify a formula for business models that use Creative Commons but instead gather fresh ideas and dynamic examples that spark new, innovative models and help others follow suit by building on what already works. At the onset, we framed our investigation in familiar business terms. We created a blank "open business model canvas," an interactive online tool that would help people design and analyze their business model.

Through the generous funding of Kickstarter backers, we set about this project first by identifying and selecting a diverse group of creators, organizations, and businesses who use Creative Commons in an integral way—what we call being **Made with Creative Commons.** We interviewed them and wrote up their stories. We analyzed what we heard and dug deep into the literature.

But as we did our research, something interesting happened. Our initial way of framing the work did not match the stories we were hearing.

Those we interviewed were not typical businesses selling to consumers and seeking to maximize profits and the bottom line. Instead, they were sharing to make the world a better place, creating relationships and community around the works being shared, and generating revenue not for unlimited growth but to sustain the operation.

They often didn't like hearing what they do described as an open business model. Their endeavor was something more than that. Something different. Something that generates not just economic value but social and cultural value. Something that involves human connection. Being **Made with Creative Commons** is not "business as usual."

We had to rethink the way we conceived of this project. And it didn't happen overnight. From the fall of 2015 through 2016, we documented our thoughts in blog posts on *Medium* and with regular updates to our Kickstarter backers. We shared drafts of case studies and analysis with our Kickstarter cocreators, who provided invaluable edits, feedback, and advice. Our thinking changed dramatically over the course of a year and a half.

Throughout the process, the two of us have often had very different ways of understanding and describing what we were learning. Learning from each other has been one of the great joys of this work, and, we hope, something that has made the final product much richer than it ever could have been if either of us undertook this project alone. We have preserved our voices throughout, and you'll be able to sense our different but complementary approaches as you read through our different sections.

While we recommend that you read the book from start to finish, each section reads more or less independently. The book is structured into two main parts.

Part one, the overview, begins with a big-picture framework written by Paul. He provides some historical context for the digital commons, describing the three ways society

has managed resources and shared wealth—the commons, the market, and the state. He advocates for thinking beyond business and market terms and eloquently makes the case for sharing and enlarging the digital commons.

The overview continues with Sarah's chapter, as she considers what it means to be successfully **Made with Creative Commons**. While making money is one piece of the pie, there is also a set of public-minded values and the kind of human connections that make sharing truly meaningful. This section outlines the ways the creators, organizations, and businesses we interviewed bring in revenue, how they further the public interest and live out their values, and how they foster connections with the people with whom they share.

And to end part one, we have a short section that explains the different Creative Commons licenses. We talk about the misconception that the more restrictive licenses—the ones that are closest to the all-rights-reserved model of traditional copyright—are the only ways to make money.

Part two of the book is made up of the twenty-four stories of the creators, businesses, and organizations we interviewed. While both of us participated in the interviews, we divided up the writing of these profiles.

Of course, we are pleased to make the book available using a Creative Commons Attribution-ShareAlike license. Please copy, distribute, translate, localize, and build upon this work.

Writing this book has transformed and inspired us. The way we now look at and think about what it means to be **Made with Creative Commons** has irrevocably changed. We hope this book inspires you and your enterprise to use Creative Commons and in so doing contribute to the transformation of our economy and world for the better.

Paul and Sarah

Part 1

THE BIG PICTURE

1 THE NEW WORLD OF DIGITAL COMMONS

PAUL STACEY

Jonathan Rowe eloquently describes the commons as “the air and oceans, the web of species, wilderness and flowing water—all are parts of the commons. So are language and knowledge, sidewalks and public squares, the stories of childhood and the processes of democracy. Some parts of the commons are gifts of nature, others the product of human endeavor. Some are new, such as the Internet; others are as ancient as soil and calligraphy.”[1]

In **Made with Creative Commons**, we focus on our current era of digital commons, a commons of human-produced works. This commons cuts across a broad range of areas including cultural heritage, education, research, technology, art, design, literature, entertainment, business, and data. Human-produced works in all these areas are increasingly digital. The Internet is a kind of global, digital commons. The individuals, organizations, and businesses we profile in our case studies use Creative Commons to share their resources online over the Internet.

The commons is not just about shared resources, however. It’s also about the social practices and values that manage them. A resource is a noun, but *to common*—to put the resource into the commons—is a verb.[2] The creators, organizations, and businesses we profile are all engaged with commoning. Their use of Creative Commons involves them in the social practice of commoning, managing resources in a collective manner with a community of users.[3] Commoning is guided by a set of values and norms that balance the costs and benefits of the enterprise with those of the community. Special regard is given to equitable access, use, and sustainability.

The Commons, the Market, and the State

Historically, there have been three ways to manage resources and share wealth: the commons (managed collectively), the state (i.e., the government), and the market—with the last two being the dominant forms today.[4]

The organizations and businesses in our case studies are unique in the way they participate in the commons while still engaging with the market and/or state. The extent of engagement with market or state varies. Some operate primarily as a commons with minimal or no reliance on the market or state.[5] Others are very much a part of the market or state, depending on them for financial sustainability. All operate as hybrids, blending the norms of the commons with those of the market or state.

Fig. 1. is a depiction of how an enterprise can have varying levels of engagement with commons, state, and market.

Some of our case studies are simply commons and market enterprises with little or no engagement with the state. A depiction of those case studies would show the state sphere as tiny or even absent. Other case studies are primarily market-based with only a small engagement with the commons. A depiction of those case studies would show the market sphere as large and the commons sphere as small. The extent to which an enterprise sees itself as being primarily of one type or another affects the balance of norms by which they operate.

All our case studies generate money as a means of livelihood and sustainability. Money is primarily of the market. Finding ways to generate revenue while holding true to the core values of the commons (usually expressed in mission statements) is challenging. To manage interaction and engagement between the commons and the market requires a deft touch, a strong sense of values, and the ability to blend the best of both.

The state has an important role to play in fostering the use and adoption of the commons. State programs and funding can deliberately contribute to and build the commons. Beyond money, laws and regulations regarding property, copyright, business, and finance can all be designed to foster the commons.

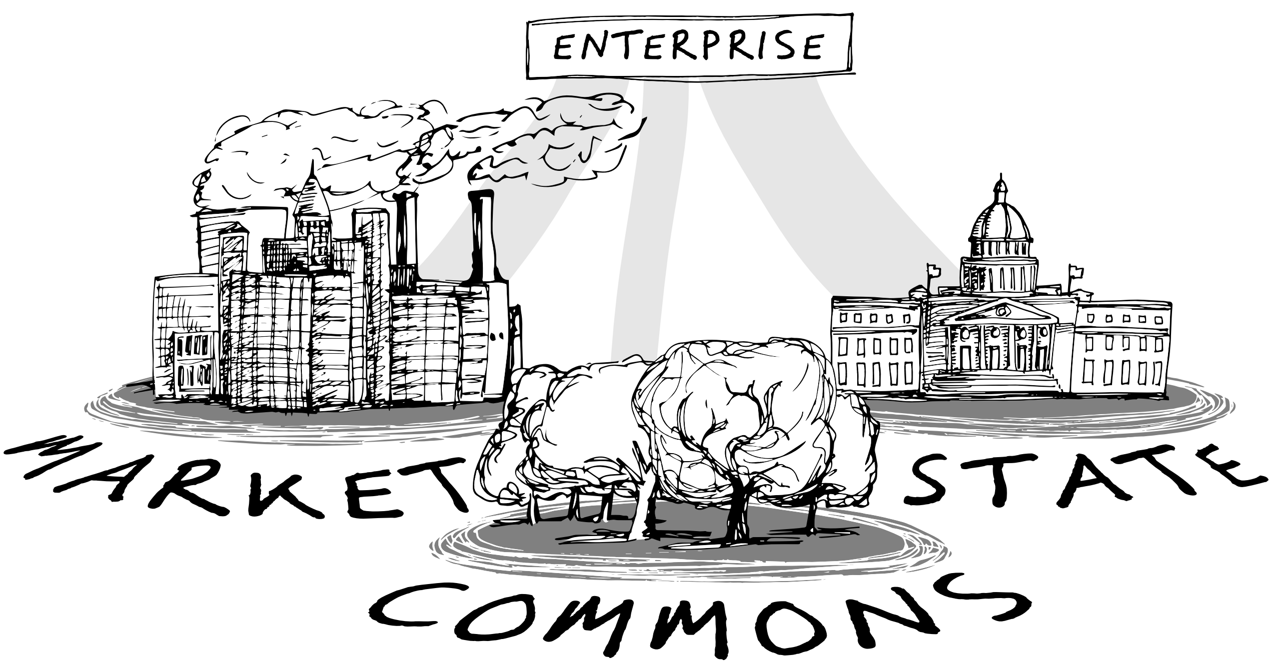


Fig. 1. Enterprise engagement with commons, state, and market.

It’s helpful to understand how the commons, market, and state manage resources differently, and not just for those who consider themselves primarily as a commons. For businesses or governmental organizations who want to engage in and use the commons, knowing how the commons operates will help them understand how best to do so. Participating in and using the commons the same way you do the market or state is not a strategy for success.

The Four Aspects of a Resource

As part of her Nobel Prize–winning work, Elinor Ostrom developed a framework for analyzing how natural resources are managed in a commons.[6] Her framework considered things like the biophysical characteristics of common resources, the community’s actors and the interactions that take place between them, rules-in-use, and outcomes. That framework has been simplified and generalized to apply to the commons, the market, and the state for this chapter.

To compare and contrast the ways in which the commons, market, and state work, let’s consider four aspects of resource management: resource characteristics, the people involved and the process they use, the norms and rules they develop to govern use, and finally actual resource use along with outcomes of that use (see Fig. 2).



Fig. 2. Four aspects of resource management.

Characteristics

Resources have particular characteristics or attributes that affect the way they can be used. Some resources are natural; others are human produced. And—significantly for today’s commons—resources can be physical or digital, which affects a resource’s inherent potential.

Physical resources exist in limited supply. If I have a physical resource and give it to you, I no longer have it. When a resource is removed and used, the supply becomes scarce or depleted. Scarcity can result in competing rivalry for the resource. **Made with Creative Commons** enterprises are usually digitally based but some of our case studies also produce resources in physical form. The costs of producing and distributing a physical good usually require them to engage with the market.

Physical resources are depletable, exclusive, and rivalrous. Digital resources, on the other hand, are nondepletable, nonexclusive, and nonrivalrous. If I share a digital resource with you, we both have the resource. Giving it to you does not mean I no longer have it. Digital resources can be infinitely stored, copied, and distributed without becoming depleted, and at close to zero cost. Abundance rather than scarcity is an inherent characteristic of digital resources.

The nondepletable, nonexclusive, and nonrivalrous nature of digital resources means the rules and norms for managing them can (and ought to) be different from how physical resources are managed. However, this is not always the case. Digital resources are frequently made artificially scarce. Placing digital resources in the commons makes them free and abundant.

Our case studies frequently manage hybrid resources, which start out as digital with the possibility of being made into a physical resource. The digital file of a book can be print-

ed on paper and made into a physical book. A computer-rendered design for furniture can be physically manufactured in wood. This conversion from digital to physical invariably has costs. Often the digital resources are managed in a free and open way, but money is charged to convert a digital resource into a physical one.

Beyond this idea of physical versus digital, the commons, market, and state conceive of resources differently (see Fig. 3). The market sees resources as private goods—commodities for sale—from which value is extracted. The state sees resources as public goods that provide value to state citizens. The commons sees resources as common goods, providing a common wealth extending beyond state boundaries, to be passed on in undiminished or enhanced form to future generations.

People and processes

In the commons, the market, and the state, different people and processes are used to manage resources. The processes used define both who has a say and how a resource is managed.

In the state, a government of elected officials is responsible for managing resources on behalf of the public. The citizens who produce and use those resources are not directly involved; instead, that responsibility is given over to the government. State ministries and departments staffed with public servants set budgets, implement programs, and manage resources based on government priorities and procedures.

In the market, the people involved are producers, buyers, sellers, and consumers. Businesses act as intermediaries between those who produce resources and those who consume or use them. Market processes seek to extract as much monetary value from resources as possible. In the market, resources are managed as commodities, frequently mass-produced, and sold to consumers on the basis of a cash transaction.

In contrast to the state and market, resources in a commons are managed more directly by the people involved.[7] Creators of human produced resources can put them in the commons by personal choice. No permission from state or market is required. Anyone can participate in the commons and determine for themselves the extent to which they want to be involved—as a contributor, user, or manager. The people involved include not only those who create and use resources but those affected by outcome of use. Who you are affects your say, actions you can take, and extent of decision making. In the commons, the community as a whole manages the resources. Resources put into the commons using Creative Commons require users to give the original creator credit. Knowing the person behind a resource makes the commons less anonymous and more personal.

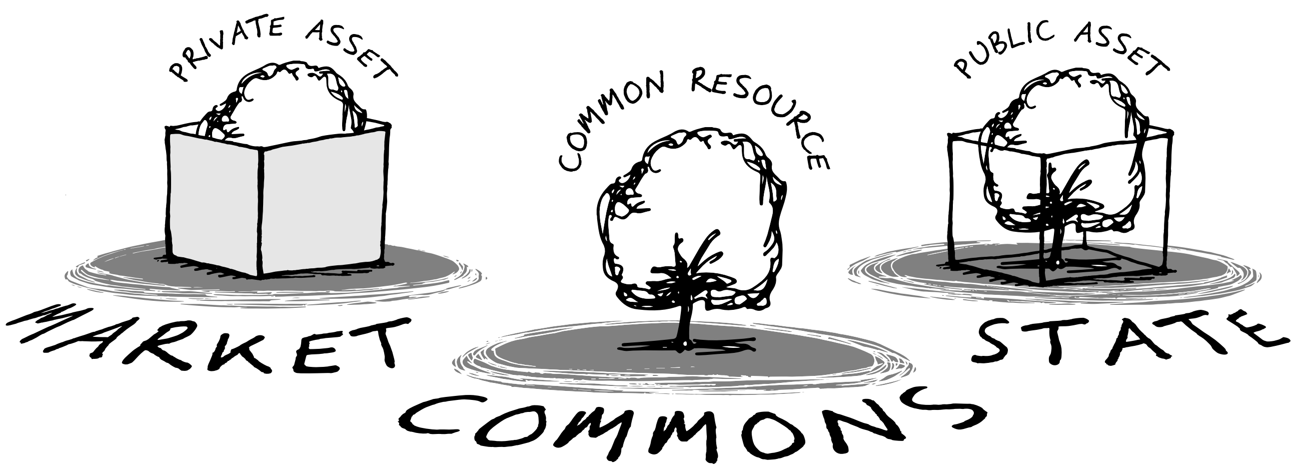


Fig. 3. How the market, commons, and state conceive of resources.

Norms and rules

The social interactions between people, and the processes used by the state, market, and commons, evolve social norms and rules. These norms and rules define permissions, allocate entitlements, and resolve disputes.

State authority is governed by national constitutions. Norms related to priorities and decision making are defined by elected officials and parliamentary procedures. State rules are expressed through policies, regulations, and laws. The state influences the norms and rules of the market and commons through the rules it passes.

Market norms are influenced by economics and competition for scarce resources. Market rules follow property, business, and financial laws defined by the state.

As with the market, a commons can be influenced by state policies, regulations, and laws. But the norms and rules of a commons are largely defined by the community. They weigh individual costs and benefits against the costs and benefits to the whole community. Consideration is given not just to economic efficiency but also to equity and sustainability.[9]

Goals

The combination of the aspects we've discussed so far—the resource's inherent characteristics, people and processes, and norms and rules—shape how resources are used. Use is also influenced by the different goals the state, market, and commons have.

In the market, the focus is on maximizing the utility of a resource. What we pay for the goods we consume is seen as an objective measure of the utility they provide. The goal then becomes maximizing total monetary value in the economy.[10] Units consumed translates to sales, revenue, profit, and growth, and these are all ways to measure goals of the market.

The state aims to use and manage resources in a way that balances the economy with the social and cultural needs of its citizens. Health care, education, jobs, the environment, transportation, security, heritage, and justice are all facets of a healthy society, and the state applies its resources toward these aims. State goals are reflected in quality of life measures.

In the commons, the goal is maximizing access, equity, distribution, participation, innovation, and sustainability. You can measure success by looking at how many people access and use a resource; how users are distributed across gender, income, and location; if a community to extend and enhance the resources is being formed; and if the resources are being used in innovative ways for personal and social good.

As hybrid combinations of the commons with the market or state, the success and sustainability of all our case study enterprises depends on their ability to strategically utilize and balance these different aspects of managing resources.

A Short History of the Commons

Using the commons to manage resources is part of a long historical continuum. However, in contemporary society, the market and the state dominate the discourse on how resources are best managed. Rarely is the commons even considered as an option. The commons has largely disappeared from consciousness and consideration. There are no news reports or speeches about the commons.

But the more than 1.1 billion resources licensed with Creative Commons around the world are indications of a grassroots move toward the commons. The commons is making a resurgence. To understand the resilience of the commons and its current renewal, it's helpful to know something of its history.

For centuries, indigenous people and preindustrialized societies managed resources, including water, food, firewood, irrigation, fish, wild game, and many other things collectively as a commons.[11] There was no market, no global economy. The state in the form of rulers influenced the commons but by no means controlled it. Direct social participation in a commons was the primary way in which resources were managed and needs met. (Fig. 4 illustrates the commons in relation to the state and the market.)

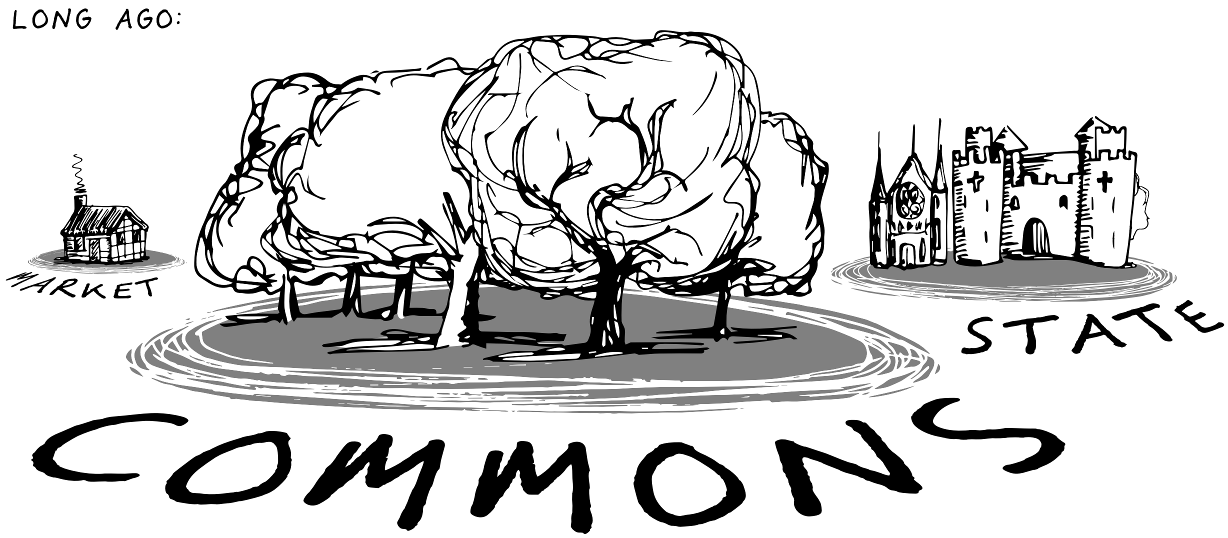


Fig. 4. In preindustrialized society.

This is followed by a long history of the state (a monarchy or ruler) taking over the commons for their own purposes. This is called enclosure of the commons.[12] In olden days, “commoners” were evicted from the land, fences and hedges erected, laws passed, and security set up to forbid access.[13] Gradually, resources became the property of the state and the state became the primary means by which resources were managed. (See Fig. 5).

Holdings of land, water, and game were distributed to ruling family and political appointees. Commoners displaced from the land migrated to cities. With the emergence of the industrial revolution, land and resources became commodities sold to businesses to support production. Monarchies evolved into elected parliaments. Commoners became labourers earning money operating the machinery of industry. Financial, business, and property laws were revised by governments to support markets, growth, and productivity. Over time ready access to market produced goods resulted in a rising standard of living, improved health, and education. Fig. 6 shows how today the market



Fig. 5. The commons is gradually superseded by the state.

is the primary means by which resources are managed.

However, the world today is going through turbulent times. The benefits of the market have been offset by unequal distribution and overexploitation.

Overexploitation was the topic of Garrett Hardin's influential essay "The Tragedy of the Commons," published in *Science* in 1968. Hardin argues that everyone in a commons seeks to maximize personal gain and will continue to do so even when the limits of the commons are reached. The commons is then tragically depleted to the point where it can no longer support anyone. Hardin's essay became widely accepted as an economic truism and a justification for private property and free markets.

However, there is one serious flaw with Hardin's "The Tragedy of the Commons"—it's fiction. Hardin did not actually study how real commons work. Elinor Ostrom won the 2009 Nobel Prize in economics for her work studying different commons all around the world. Ostrom's work shows that natural resource commons can be successfully managed by local communities without any regulation by central authorities or without privatization. Government and privatization are not the only two choices. There is a third way: management by the people, where those that are directly impacted are directly involved. With natural resources, there is a regional locality. The people in the region are the most familiar with the natural resource, have the most direct relationship and history with it, and are therefore best situated to manage it. Ostrom's approach to the governance of natural resources broke with convention; she recognized the importance of the commons as an alternative to the market or state for solving problems of collective action.[14]

Hardin failed to consider the actual social dynamic of the commons. His model assumed that people in the commons act autonomously, out of pure self-interest, without interaction or consideration of others. But as Ostrom found, in reality, managing common resources together forms a community and encourages discourse. This naturally generates norms and rules that help people work collectively and ensure a sustainable commons. Paradoxically, while Hardin's essay is called The Tragedy of the Commons it might more accurately be titled The Tragedy of the Market.

Hardin's story is based on the premise of depletable resources. Economists have focused almost exclusively on scarcity-based markets. Very little is known about how abundance works.[15] The emergence of information technology and the Internet has led to an explosion in digital resources and new means of sharing

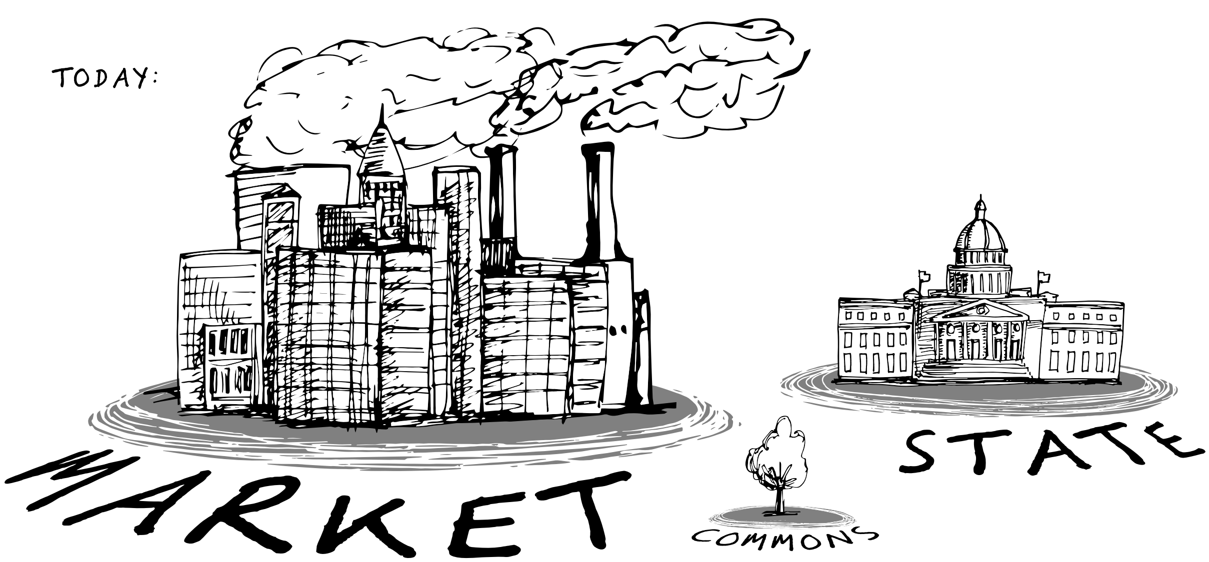


Fig. 6. How the market, the state, and the commons look today.

and distribution. Digital resources can never be depleted. An absence of a theory or model for how abundance works, however, has led the market to make digital resources artificially scarce and makes it possible for the usual market norms and rules to be applied.

When it comes to use of state funds to create digital goods, however, there is really no justification for artificial scarcity. The norm for state funded digital works should be that they are freely and openly available to the public that paid for them.

The Digital Revolution

In the early days of computing, programmers and developers learned from each other by sharing software. In the 1980s, the free-software movement codified this practice of sharing into a set of principles and freedoms:

- The freedom to run a software program as you wish, for any purpose.
- The freedom to study how a software program works (because access to the source code has been freely given), and change it so it does your computing as you wish.
- The freedom to redistribute copies.
- The freedom to distribute copies of your modified versions to others.[16]

These principles and freedoms constitute a set of norms and rules that typify a digital commons.

In the late 1990s, to make the sharing of source code and collaboration more appealing to companies, the open-source-software initiative converted these principles into licenses and standards for managing access to and distribution of software. The benefits of open source—such as reliability, scalability, and quality verified by independent peer review—became widely recognized and accepted. Customers liked the way open source gave them control without being locked into a closed, proprietary technology. Free and open-source software also generated a network effect where the value of a product or service increases with the number of people using it.[17] The dramatic growth of the Internet itself owes much to the fact that nobody has a proprietary lock on core Internet protocols.

While open-source software functions as a commons, many businesses and markets did build up around it. Business models based on the licenses and standards of open-source software evolved alongside organizations that managed software code on principles of abundance rather than scarcity. Eric Raymond's essay "The Magic Cauldron" does a great job of analyzing the economics and business models associated with open-source software.[18] These models can provide examples of sustainable approaches for those **Made with Creative Commons**.

It isn't just about an abundant availability of digital assets but also about abundance of participation. The growth of personal computing, information technology, and the Internet made it possible for mass participation in producing creative works and distributing them. Photos, books, music, and many other forms of digital content could now be readily created and distributed by almost anyone. Despite this potential for abundance, by default these digital works are governed by copyright laws. Under copyright, a digital work is the property of the creator, and by law others are excluded from accessing and using it without the creator's permission.

But people like to share. One of the ways we define ourselves is by sharing valuable and entertaining content. Doing so grows and nourishes relationships, seeks to change opinions, encourages action, and informs others about who we are and what we care about. Sharing lets us feel more involved with the world.[19]

The Birth of Creative Commons

In 2001, Creative Commons was created as a nonprofit to support all those who wanted to share digital content. A suite of Creative Commons licenses was modeled on those of open-source software but for use with digital con-

tent rather than software code. The licenses give everyone from individual creators to large companies and institutions a simple, standardized way to grant copyright permissions to their creative work.

Creative Commons licenses have a three-layer design. The norms and rules of each license are first expressed in full legal language as used by lawyers. This layer is called the *legal code*. But since most creators and users are not lawyers, the licenses also have a *commons deed*, expressing the permissions in plain language, which regular people can read and quickly understand. It acts as a user-friendly interface to the legal-code layer beneath. The third layer is the machine-readable one, making it easy for the Web to know a work is Creative Commons–licensed by expressing permissions in a way that software systems, search engines, and other kinds of technology can understand.[20] Taken together, these three layers ensure creators, users, and even the Web itself understand the norms and rules associated with digital content in a commons.

In 2015, there were over one billion Creative Commons licensed works in a global commons. These works were viewed online 136 billion times. People are using Creative Commons licenses all around the world, in thirty-four languages. These resources include photos, artwork, research articles in journals, educational resources, music and other audio tracks, and videos.

Individual artists, photographers, musicians, and filmmakers use Creative Commons, but so do museums, governments, creative industries, manufacturers, and publishers. Millions of websites use CC licenses, including major platforms like Wikipedia and Flickr and smaller ones like blogs.[21] Users of Creative Commons are diverse and cut across many different sectors. (Our case studies were chosen to reflect that diversity.)

Some see Creative Commons as a way to share a gift with others, a way of getting known, or a way to provide social benefit. Others are simply committed to the norms associated with a commons. And for some, participation has been spurred by the free-culture movement, a social movement that promotes the freedom to distribute and modify creative works. The free-culture movement sees a commons as providing significant benefits compared to restrictive copyright laws. This ethos of free exchange in a commons aligns the free-culture movement with the free and open-source software movement.

Over time, Creative Commons has spawned a range of open movements, including open educational resources, open access, open science, and open data. The goal in every case has been to democratize participation and share digital resources at no cost, with legal permissions for anyone to freely access, use, and modify.

The state is increasingly involved in supporting open movements. The Open Government Partnership was launched in 2011 to provide an international platform for governments to become more open, accountable, and responsive to citizens. Since then, it has grown from eight participating countries to seventy.[22] In all these countries, government and civil society are working together to develop and implement ambitious open-government reforms. Governments are increasingly adopting Creative Commons to ensure works funded with taxpayer dollars are open and free to the public that paid for them.

The Changing Market

Today's market is largely driven by global capitalism. Law and financial systems are structured to support extraction, privatization, and corporate growth. A perception that the market is more efficient than the state has led to continual privatization of many public natural resources, utilities, services, and infrastructures.[23] While this system has been highly efficient at generating consumerism and the growth of gross domestic product, the impact on human well-being has been mixed. Offsetting rising living standards and improvements to health and education are ever-increasing wealth inequality, social inequality, poverty,

deterioration of our natural environment, and breakdowns of democracy.[24]

In light of these challenges there is a growing recognition that GDP growth should not be an end in itself, that development needs to be socially and economically inclusive, that environmental sustainability is a requirement not an option, and that we need to better balance the market, state and community.[25]

These realizations have led to a resurgence of interest in the commons as a means of enabling that balance. City governments like Bologna, Italy, are collaborating with their citizens to put in place regulations for the care and regeneration of urban commons.[26] Seoul and Amsterdam call themselves "sharing cities," looking to make sustainable and more efficient use of scarce resources. They see sharing as a way to improve the use of public spaces, mobility, social cohesion, and safety.[27]

The market itself has taken an interest in the sharing economy, with businesses like Airbnb providing a peer-to-peer marketplace for short-term lodging and Uber providing a platform for ride sharing. However, Airbnb and Uber are still largely operating under the usual norms and rules of the market, making them less like a commons and more like a traditional business seeking financial gain. Much of the sharing economy is not about the commons or building an alternative to a corporate-driven market economy; it's about extending the deregulated free market into new areas of our lives.[28] While none of the people we interviewed for our case studies would describe themselves as part of the sharing economy, there are in fact some significant parallels. Both the sharing economy and the commons make better use of asset capacity. The sharing economy sees personal residents and cars as having latent spare capacity with rental value. The equitable access of the commons broadens and diversifies the number of people who can use and derive value from an asset.

One way **Made with Creative Commons** case studies differ from those of the sharing economy is their focus on *digital* resources. Digital resources function under different economic rules than physical ones. In a world where prices always seem to go up, information technology is an anomaly. Computer-processing power, storage, and bandwidth are all rapidly increasing, but rather than costs going up, costs are coming down. Digital technologies are getting faster, better, and cheaper. The cost of anything built on these technologies will always go down until it is close to zero.[29]

Those that are **Made with Creative Commons** are looking to leverage the unique inherent characteristics of digital resources, including lowering costs. The use of digital-rights-management technologies in the form of locks, passwords, and controls to prevent digital goods from being accessed, changed, replicated, and distributed is minimal or nonexistent. Instead, Creative Commons licenses are used to put digital content out in the commons, taking advantage of the unique economics associated with being digital. The aim is to see digital resources used as widely and by as many people as possible. Maximizing access and participation is a common goal. They aim for abundance over scarcity.

The incremental cost of storing, copying, and distributing digital goods is next to zero, making abundance possible. But imagining a market based on abundance rather than scarcity is so alien to the way we conceive of economic theory and practice that we struggle to do so.[30] Those that are **Made with Creative Commons** are each pioneering in this new landscape, devising their own economic models and practice.

Some are looking to minimize their interactions with the market and operate as autonomously as possible. Others *are* operating largely as a business within the existing rules and norms of the market. And still others are looking to change the norms and rules by which the market operates.

For an ordinary corporation, making social benefit a part of its operations is difficult, as it's legally required to make decisions that financially benefit stockholders. But new forms of business are emerging. There are benefit corporations and social enterprises, which

broaden their business goals from making a profit to making a positive impact on society, workers, the community, and the environment.[31] Community-owned businesses, worker-owned businesses, cooperatives, guilds, and other organizational forms offer alternatives to the traditional corporation. Collectively, these alternative market entities are changing the rules and norms of the market.[32]

"A book on open business models" is how we described it in this book's Kickstarter campaign. We used a handbook called *Business Model Generation* as our reference for defining just what a business model is. Developed over nine years using an "open process" involving 470 coauthors from forty-five countries, it is useful as a framework for talking about business models.[33]

It contains a "business model canvas," which conceives of a business model as having nine building blocks.[34] This blank canvas can serve as a tool for anyone to design their own business model. We remixed this business model canvas into an *open* business model canvas, adding three more building blocks relevant to hybrid market, commons enterprises: *social good*, *Creative Commons license*, and *"type of open environment that the business fits in."*[35] This enhanced canvas proved useful when we analyzed businesses and helped start-ups plan their economic model.

In our case study interviews, many expressed discomfort over describing themselves as an open business model—the term *business model* suggested primarily being situated in the market. Where you sit on the commons-to-market spectrum affects the extent to which you see yourself as a business in the market. The more central to the mission shared resources and commons values are, the less comfort there is in describing yourself, or depicting what you do, as a *business*. Not all who have endeavors **Made with Creative Commons** use business speak; for some the process has been experimental, emergent, and organic rather than carefully planned using a predefined model.

The creators, businesses, and organizations we profile all engage with the market to generate revenue in some way. The ways in which this is done vary widely. Donations, pay what you can, memberships, "digital for free but physical for a fee," crowdfunding, matchmaking, value-add services, patrons . . . the list goes on and on. (Initial description of how to earn revenue available through reference note. For latest thinking see How to Bring In Money in the next section.) [36] There is no single magic bullet, and each endeavor has devised ways that work for them. Most make use of more than one way. Diversifying revenue streams lowers risk and provides multiple paths to sustainability.

Benefits of the Digital Commons

While it may be clear why commons-based organizations want to interact and engage with the market (they need money to survive), it may be less obvious why the market would engage with the commons. The digital commons offers many benefits.

The commons speeds dissemination. The free flow of resources in the commons offers tremendous economies of scale. Distribution is decentralized, with all those in the commons empowered to share the resources they have access to. Those that are **Made with Creative Commons** have a reduced need for sales or marketing. Decentralized distribution amplifies supply and know-how.

The commons ensures access to all. The market has traditionally operated by putting resources behind a paywall requiring payment first before access. The commons puts resources in the open, providing access up front without payment. Those that are **Made with Creative Commons** make little or no use of digital rights management (DRM) to manage resources. Not using DRM frees them of the costs of acquiring DRM technology and staff resources to engage in the punitive practices associated with restricting access. The way the commons provides access to everyone levels the playing field and promotes inclusiveness, equity, and fairness.

The commons maximizes participation. Resources in the commons can be used and contributed to by everyone. Using the resources of others, contributing your own, and mixing yours with others to create new works are all dynamic forms of participation made possible by the commons. Being **Made with Creative Commons** means you're engaging as many users with your resources as possible. Users are also authoring, editing, remixing, curating, localizing, translating, and distributing. The commons makes it possible for people to directly participate in culture, knowledge building, and even democracy, and many other socially beneficial practices.

The commons spurs innovation. Resources in the hands of more people who can use them leads to new ideas. The way commons resources can be modified, customized, and improved results in derivative works never imagined by the original creator. Some endeavors that are **Made with Creative Commons** deliberately encourage users to take the resources being shared and innovate them. Doing so moves research and development (R&D) from being solely inside the organization to being in the community.[37] Community-based innovation will keep an organization or business on its toes. It must continue to contribute new ideas, absorb and build on top of the innovations of others, and steward the resources and the relationship with the community.

The commons boosts reach and impact. The digital commons is global. Resources may be created for a local or regional need, but they go far and wide generating a global impact. In the digital world, there are no borders between countries. When you are **Made with Creative Commons**, you are often local and global at the same time: Digital designs being globally distributed but made and manufactured locally. Digital books or music being globally distributed but readings and concerts performed locally. The digital commons magnifies impact by connecting creators to those who use and build on their work both locally and globally.

The commons is generative. Instead of extracting value, the commons adds value. Digitized resources persist without becoming depleted, and through use are improved, personalized, and localized. Each use adds value. The market focuses on generating value for the business and the customer. The commons generates value for a broader range of beneficiaries including the business, the customer, the creator, the public, and the commons itself. The generative nature of the commons means that it is more cost-effective and produces a greater return on investment. Value is not just measured in financial terms. Each new resource added to the commons provides value to the public and contributes to the overall value of the commons.

The commons brings people together for a common cause. The commons vests people directly with the responsibility to manage the resources for the common good. The costs and benefits for the individual are balanced with the costs and benefits for the community and for future generations. Resources are not anonymous or mass produced. Their provenance is known and acknowledged through attribution and other means. Those that are **Made with Creative Commons** generate awareness and reputation based on their contributions to the commons. The reach, impact, and sustainability of those contributions rest largely on their ability to forge relationships and connections with those who use and improve them. By functioning on the basis of social engagement, not monetary exchange, the commons unifies people.

The benefits of the commons are many. When these benefits align with the goals of individuals, communities, businesses in the market, or state enterprises, choosing to manage resources as a commons ought to be the option of choice.

Our Case Studies

The creators, organizations, and businesses in our case studies operate as nonprofits, for-profits, and social enterprises. Regardless of legal status, they all have a social mission. Their primary reason for being is to make the world a better place, not to profit. Money is a

means to a social end, not the end itself. They factor public interest into decisions, behavior, and practices. Transparency and trust are really important. Impact and success are measured against social aims expressed in mission statements, and are not just about the financial bottom line.

The case studies are based on the narratives told to us by founders and key staff. Instead of solely using financials as the measure of success and sustainability, they emphasized their mission, practices, and means by which they measure success. Metrics of success are a blend of how social goals are being met and how sustainable the enterprise is.

Our case studies are diverse, ranging from publishing to education and manufacturing. All of the organizations, businesses, and creators in the case studies produce digital resources. Those resources exist in many forms including books, designs, songs, research, data, cultural works, education materials, graphic icons, and video. Some are digital representations of physical resources. Others are born digital but can be made into physical resources.

They are creating new resources, or using the resources of others, or mixing existing resources together to make something new. They, and their audience, all play a direct, participatory role in managing those resources, including their preservation, curation, distribution, and enhancement. Access and participation is open to all regardless of monetary means.

And as users of Creative Commons licenses, they are automatically part of a global community. The new digital commons is global. Those we profiled come from nearly every continent in the world. To build and interact within this global community is conducive to success.

Creative Commons licenses may express legal rules around the use of resources in a commons, but success in the commons requires more than following the letter of the law and acquiring financial means. Over and over we heard in our interviews how success and sustainability are tied to a set of beliefs, values, and principles that underlie their actions: Give more than you take. Be open and inclusive. Add value. Make visible what you are using from the commons, what you are adding, and what you are monetizing. Maximize abundance. Give attribution. Express gratitude. Develop trust; don't exploit. Build relationship and community. Be transparent. Defend the commons.

The new digital commons is here to stay. **Made With Creative Commons** case studies show how it's possible to be part of this commons while still functioning within market and state systems. The commons generates benefits neither the market nor state can achieve on their own. Rather than the market or state dominating as primary means of resource management, a more balanced alternative is possible.

Enterprise use of Creative Commons has only just begun. The case studies in this book are merely starting points. Each is changing and evolving over time. Many more are joining and inventing new models. This overview aims to provide a framework and language for thinking and talking about the new digital commons. The remaining sections go deeper providing further guidance and insights on how it works.

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2

HOW TO BE MADE WITH CREATIVE COMMONS

SARAH HINCHLIFF PEARSON

When we began this project in August 2015, we set out to write a book about business models that involve Creative Commons licenses in some significant way—what we call being **Made with Creative Commons**. With the help of our Kickstarter backers, we chose twenty-four endeavors from all around the world that are **Made with Creative Commons**. The mix is diverse, from an individual musician to a university-textbook publisher to an electronics manufacturer. Some make their own content and share under Creative Commons licensing. Others are platforms for CC-licensed creative work made by others. Many sit somewhere in between, both using and contributing creative work that's shared with the public. Like all who use the licenses, these endeavors share their work—whether it's open data or furniture designs—in a way that enables the public not only to access it but also to make use of it.

We analyzed the revenue models, customer segments, and value propositions of each endeavor. We searched for ways that putting their content under Creative Commons licenses helped boost sales or increase reach. Using traditional measures of economic success, we tried to map these business models in a way that meaningfully incorporated the impact of Creative Commons. In our interviews, we dug into the motivations, the role of CC licenses, modes of revenue generation, definitions of success.

In fairly short order, we realized the book we set out to write was quite different from the one that was revealing itself in our interviews and research.

It isn't that we were wrong to think you can make money while using Creative Commons licenses. In many instances, CC *can* help make you more money. Nor were we wrong that there are business models out there that others who want to use CC licensing as part of their livelihood or business could replicate. What we didn't realize was just how misguided it would be to write a book about being **Made with Creative Commons** using only a business lens.

According to the seminal handbook *Business Model Generation*, a business model "describes the rationale of how an organization creates, delivers, and captures value."[1] Thinking about sharing in terms of creating and capturing value always felt inappropriately transactional and out of place, something we heard time and time again in our interviews. And as Cory Doctorow told us in our interview with him, "*Business model* can mean anything you want it to mean."

Eventually, we got it. Being **Made with Creative Commons** is more than a business model. While we will talk about specific revenue models as one piece of our analysis (and in more detail in the case studies), we scrapped that as our guiding rubric for the book.

Admittedly, it took me a long time to get there. When Paul and I divided up our writing after finishing the research, my charge was to distill everything we learned from the case studies and write up the practical lessons and takeaways. I spent months trying to jam what we learned into the business-model box, convinced there must be some formula for the way things interacted. But there is no formula. You'll probably have to discard that way of thinking before you read any further.

In every interview, we started from the same simple questions. Amid all the diversity among the creators, organizations, and businesses we profiled, there was one constant. Being **Made with Creative Commons** may be good for business, but that is not why they do it. Sharing work with Creative Commons is, at its core, a moral decision. The commercial and other self-interested benefits are secondary. Most decided to use CC licenses first and found a revenue model later. This was our first hint that writing a book solely about the impact of sharing on business might be a little off track.

But we also started to realize something about what it means to be **Made with Creative Commons**. When people talked to us about how and why they used CC, it was clear that it meant something more than using a copyright license. It also represented a set of values. There is symbolism behind using CC, and that symbolism has many layers.

At one level, being **Made with Creative Commons** expresses an affinity for the value of Creative Commons. While there are many different flavors of CC licenses and nearly infinite ways to be **Made with Creative Commons**, the basic value system is rooted in a fundamental belief that knowledge and creativity are building blocks of our culture rather than just commodities from which to extract market value. These values reflect a belief that the common good should always be part of the equation when we determine how to regulate our cultural outputs. They reflect a belief that everyone has something to contribute, and that no one can own our shared culture. They reflect a belief in the promise of sharing.

Whether the public makes use of the opportunity to copy and adapt your work, sharing with a Creative Commons license is a symbol of how you want to interact with the people who consume your work. Whenever you create something, "all rights reserved" under copyright is automatic, so the copyright symbol (©) on the work does not necessarily come across as a marker of distrust or excessive protectionism. But using a CC license *can* be a symbol of the opposite—of wanting a real human relationship, rather than an impersonal

market transaction. It leaves open the possibility of connection.

Being **Made with Creative Commons** not only demonstrates values connected to CC and sharing. It also demonstrates that something other than profit drives what you do. In our interviews, we always asked what success looked like for them. It was stunning how rarely money was mentioned. Most have a deeper purpose and a different vision of success.

The driving motivation varies depending on the type of endeavor. For individual creators, it is most often about personal inspiration. In some ways, this is nothing new. As Doctorow has written, "Creators usually start doing what they do for love."[2] But when you share your creative work under a CC license, that dynamic is even more pronounced. Similarly, for technological innovators, it is often less about creating a specific new thing that will make you rich and more about solving a specific problem you have. The creators of Arduino told us that the key question when creating something is "Do you as the creator want to use it? It has to have personal use and meaning."

Many that are **Made with Creative Commons** have an express social mission that underpins everything they do. In many cases, sharing with Creative Commons expressly advances that social mission, and using the licenses can be the difference between legitimacy and hypocrisy. Noun Project co-founder Edward Boatman told us they could not have stated their social mission of sharing with a straight face if they weren't willing to show the world that it was OK to share their content using a Creative Commons license.

This dynamic is probably one reason why there are so many nonprofit examples of being **Made with Creative Commons**. The content is the result of a labor of love or a tool to drive social change, and money is like gas in the car, something that you need to keep going but not an end in itself. Being **Made with Creative Commons** is a different vision of a business or livelihood, where profit is not paramount, and producing social good and human connection are integral to success.

Even if profit isn't the end goal, you have to bring in money to be successfully **Made with Creative Commons**. At a bare minimum, you have to make enough money to keep the lights on.

The costs of doing business vary widely for those made with CC, but there is generally a much lower threshold for sustainability than there used to be for any creative endeavor. Digital technology has made it easier than ever to create, and easier than ever to distribute. As Doctorow put it in his book *Information Doesn't Want to Be Free*, "If analog dollars have turned into digital dimes (as the critics of ad-supported media have it), there is the fact that it's possible to run a business that gets the same amount of advertising as its forebears at a fraction of the price."

Some creation costs are the same as they always were. It takes the same amount of time and money to write a peer-reviewed journal article or paint a painting. Technology can't change that. But other costs are dramatically reduced by technology, particularly in production-heavy domains like filmmaking.[3] CC-licensed content and content in the public domain, as well as the work of volunteer collaborators, can also dramatically reduce costs if they're being used as resources to create something new. And, of course, there is the reality that some content would be created whether or not the creator is paid because it is a labor of love.

Distributing content is almost universally cheaper than ever. Once content is created, the costs to distribute copies digitally are essentially zero.[4] The costs to distribute physical copies are still significant, but lower than they have been historically. And it is now much easier to print and distribute physical copies on-demand, which also reduces costs. Depending on the endeavor, there can be a whole host of other possible expenses like marketing and promotion, and even expenses associated with the various ways money is being made, like touring or custom training.

It's important to recognize that the biggest impact of technology on creative endeavors is that creators can now foot the costs of creation and distribution themselves. People now often have a direct route to their potential public without necessarily needing intermediaries like record labels and book publishers. Doctorow wrote, "If you're a creator who never got the time of day from one of the great imperial powers, this is your time. Where once you had no means of reaching an audience without the assistance of the industry-dominating megacompanies, now you have *hundreds* of ways to do it without them."[5] Previously, distribution of creative work involved the costs associated with sustaining a monolithic entity, now creators can do the work themselves. That means the financial needs of creative endeavors can be a lot more modest.

Whether for an individual creator or a larger endeavor, it usually isn't enough to break even if you want to make what you're doing a livelihood. You need to build in some support for the general operation. This extra bit looks different for everyone, but importantly, in nearly all cases for those **Made with Creative Commons**, the definition of "enough money" looks a lot different than it does in the world of venture capital and stock options. It is more about sustainability and less about unlimited growth and profit. SparkFun founder Nathan Seidle told us, "*Business model* is a really grandiose word for it. It is really just about keeping the operation going day to day."

This book is a testament to the notion that it is possible to make money while using CC licenses and CC-licensed content, but we are still very much at an experimental stage. The creators, organizations, and businesses we profile in this book are blazing the trail and adapting in real time as they pursue this new way of operating.

There are, however, plenty of ways in which CC licensing can be good for business in fairly predictable ways. The first is how it helps solve "problem zero."

Problem Zero: Getting Discovered

Once you create or collect your content, the next step is finding users, customers, fans—in other words, your people. As Amanda Palmer wrote, "It has to start with the art. The songs had to touch people initially, and mean something, for anything to work at all."[6] There isn't any magic to finding your people, and there is certainly no formula. Your work has to connect with people and offer them some artistic and/or utilitarian value. In some ways, this is easier than ever. Online we are not limited by shelf space, so there is room for every obscure interest, taste, and need imaginable. This is what Chris Anderson dubbed the Long Tail, where consumption becomes less about mainstream mass "hits" and more about micromarkets for every particular niche. As Anderson wrote, "We are all different, with different wants and needs, and the Internet now has a place for all of them in the way that physical markets did not."[7] We are no longer limited to what appeals to the masses.

While finding "your people" online is theoretically easier than in the analog world, as a practical matter it can still be difficult to actually get noticed. The Internet is a firehose of content, one that only grows larger by the minute. As a content creator, not only are you competing for attention against more content creators than ever before, you are competing against creativity generated *outside* the market as well.[8] Anderson wrote, "The greatest change of the past decade has been the shift in time people spend consuming amateur content instead of professional content."[9] To top it all off, you have to compete against the rest of their lives, too—"friends, family, music playlists, soccer games, and nights on the town."[10] Somehow, some way, you have to get noticed by the right people.

When you come to the Internet armed with an all-rights-reserved mentality from the start, you are often restricting access to your work before there is even any demand for it. In

many cases, requiring payment for your work is part of the traditional copyright system. Even a tiny cost has a big effect on demand. It's called the *penny gap*—the large difference in demand between something that is available at the price of one cent versus the price of zero.[11] That doesn't mean it is wrong to charge money for your content. It simply means you need to recognize the effect that doing so will have on demand. The same principle applies to restricting access to copy the work. If your problem is how to get discovered and find "your people," prohibiting people from copying your work and sharing it with others is counterproductive.

Of course, it's not that being discovered by people who like your work will make you rich—far from it. But as Cory Doctorow says, "Recognition is one of many necessary preconditions for artistic success."[12]

Choosing not to spend time and energy restricting access to your work and policing infringement also builds goodwill. Lumen Learning, a for-profit company that publishes online educational materials, made an early decision not to prevent students from accessing their content, even in the form of a tiny paywall, because it would negatively impact student success in a way that would undermine the social mission behind what they do. They believe this decision has generated an immense amount of goodwill within the community.

It is not just that restricting access to your work may undermine your social mission. It also may alienate the people who most value your creative work. If people like your work, their natural instinct will be to share it with others. But as David Bollier wrote, "Our natural human impulses to imitate and share—the essence of culture—have been criminalized."[13]

The fact that copying can carry criminal penalties undoubtedly deters copying it, but copying with the click of a button is too easy and convenient to ever fully stop it. Try as the copyright industry might to persuade us otherwise, copying a copyrighted work just doesn't feel like stealing a loaf of bread. And, of course, that's because it isn't. Sharing a creative work has no impact on anyone else's ability to make use of it.

If you take some amount of copying and sharing your work as a given, you can invest your time and resources elsewhere, rather than wasting them on playing a cat and mouse game with people who want to copy and share your work. Lizzy Jongma from the Rijksmuseum said, "We could spend a lot of money trying to protect works, but people are going to do it anyway. And they will use bad-quality versions." Instead, they started releasing high-resolution digital copies of their collection into the public domain and making them available for free on their website. For them, sharing was a form of quality control over the copies that were inevitably being shared online. Doing this meant forgoing the revenue they previously got from selling digital images. But Lizzy says that was a small price to pay for all of the opportunities that sharing unlocked for them.

Being **Made with Creative Commons** means you stop thinking about ways to artificially make your content scarce, and instead leverage it as the potentially abundant resource it is.[14] When you see information abundance as a feature, not a bug, you start thinking about the ways to use the idling capacity of your content to your advantage. As my friend and colleague Eric Steuer once said, "Using CC licenses shows you get the Internet."

Cory Doctorow says it costs him nothing when other people make copies of his work, and it opens the possibility that he might get something in return.[15] Similarly, the makers of the Arduino boards knew it was impossible to stop people from copying their hardware, so they decided not to even try and instead look for the benefits of being open. For them, the result is one of the most ubiquitous pieces of hardware in the world, with a thriving online community of tinkerers and innovators that have done things with their work they never could have done otherwise.

There are all kinds of way to leverage the power of sharing and remix to your benefit. Here are a few.

Use CC to grow a larger audience

Putting a Creative Commons license on your content won't make it automatically go viral, but eliminating legal barriers to copying the work certainly can't hurt the chances that your work will be shared. The CC license symbolizes that sharing is welcome. It can act as a little tap on the shoulder to those who come across the work—a nudge to copy the work if they have any inkling of doing so. All things being equal, if one piece of content has a sign that says Share and the other says Don't Share (which is what "©" means), which do you think people are more likely to share?

The Conversation is an online news site with in-depth articles written by academics who are experts on particular topics. All of the articles are CC-licensed, and they are copied and reshared on other sites by design. This proliferating effect, which they track, is a central part of the value to their academic authors who want to reach as many readers as possible.

The idea that more eyeballs equates with more success is a form of the *max strategy*, adopted by Google and other technology companies. According to Google's Eric Schmidt, the idea is simple: "Take whatever it is you are doing and do it at the max in terms of distribution. The other way of saying this is that since marginal cost of distribution is free, you might as well put things everywhere."[16] This strategy is what often motivates companies to make their products and services free (i.e., no cost), but the same logic applies to making content freely shareable. Because CC-licensed content is free (as in cost) *and* can be freely copied, CC licensing makes it even more accessible and likely to spread.

If you are successful in reaching more users, readers, listeners, or other consumers of your work, you can start to benefit from the bandwagon effect. The simple fact that there are other people consuming or following your work spurs others to want to do the same.[17] This is, in part, because we simply have a tendency to engage in herd behavior, but it is also because a large following is at least a partial indicator of quality or usefulness.[18]

Use CC to get attribution and name recognition

Every Creative Commons license requires that credit be given to the author, and that reusers supply a link back to the original source of the material. CC0, not a license but a tool used to put work in the public domain, does not make attribution a legal requirement, but many communities still give credit as a matter of best practices and social norms. In fact, it is social norms, rather than the threat of legal enforcement, that most often motivate people to provide attribution and otherwise comply with the CC license terms anyway. This is the mark of any well-functioning community, within both the marketplace and the society at large.[19] CC licenses reflect a set of wishes on the part of creators, and in the vast majority of circumstances, people are naturally inclined to follow those wishes. This is particularly the case for something as straightforward and consistent with basic notions of fairness as providing credit.

The fact that the name of the creator follows a CC-licensed work makes the licenses an important means to develop a reputation or, in corporate speak, a brand. The drive to associate your name with your work is not just based on commercial motivations, it is fundamental to authorship. Knowledge Unlatched is a nonprofit that helps to subsidize the print production of CC-licensed academic texts by pooling contributions from libraries around the United States. The CEO, Frances Pinter, says that the Creative Commons license on the works has a huge value to authors because reputation is the most important currency for academics. Sharing with CC is a way of having the most people see and cite your work.

Attribution can be about more than just receiving credit. It can also be about establishing provenance. People naturally want to know where content came from—the source of a work is sometimes just as interesting as the work itself. Opendesk is a platform for furniture designers to share their designs. Consumers who like those designs can then get matched with local makers who turn the de-

signs into real-life furniture. The fact that I, sitting in the middle of the United States, can pick out a design created by a designer in Tokyo and then use a maker within my own community to transform the design into something tangible is part of the power of their platform. The provenance of the design is a special part of the product.

Knowing the source of a work is also critical to ensuring its credibility. Just as a trademark is designed to give consumers a way to identify the source and quality of a particular good and service, knowing the author of a work gives the public a way to assess its credibility. In a time when online discourse is plagued with misinformation, being a trusted information source is more valuable than ever.

Use CC-licensed content as a marketing tool

As we will cover in more detail later, many endeavors that are **Made with Creative Commons** make money by providing a product or service *other* than the CC-licensed work. Sometimes that other product or service is completely unrelated to the CC content. Other times it's a physical copy or live performance of the CC content. In all cases, the CC content can attract people to your other product or service.

Knowledge Unlatched's Pinter told us she has seen time and again how offering CC-licensed content—that is, digitally for free—actually increases sales of the printed goods because it functions as a marketing tool. We see this phenomenon regularly with famous artwork. The *Mona Lisa* is likely the most recognizable painting on the planet. Its ubiquity has the effect of catalyzing interest in seeing the painting in person, and in owning physical goods with the image. Abundant copies of the content often entice more demand, not blunt it. Another example came with the advent of the radio. Although the music industry did not see it coming (and fought it!), free music on the radio functioned as advertising for the paid version people bought in music stores.[20] Free can be a form of promotion.

In some cases, endeavors that are **Made with Creative Commons** do not even need dedicated marketing teams or marketing budgets. Cards Against Humanity is a CC-licensed card game available as a free download. And because of this (thanks to the CC license on the game), the creators say it is one of the best-marketed games in the world, and they have never spent a dime on marketing. The textbook publisher OpenStax has also avoided hiring a marketing team. Their products are free, or cheaper to buy in the case of physical copies, which makes them much more attractive to students who then demand them from their universities. They also partner with service providers who build atop the CC-licensed content and, in turn, spend money and resources marketing those services (and by extension, the OpenStax textbooks).

Use CC to enable hands-on engagement with your work

The great promise of Creative Commons licensing is that it signifies an embrace of remix culture. Indeed, this is the great promise of digital technology. The Internet opened up a whole new world of possibilities for public participation in creative work.

Four of the six CC licenses enable reusers to take apart, build upon, or otherwise adapt the work. Depending on the context, adaptation can mean wildly different things—translating, updating, localizing, improving, transforming. It enables a work to be customized for particular needs, uses, people, and communities, which is another distinct value to offer the public.[21] Adaptation is more game changing in some contexts than others. With educational materials, the ability to customize and update the content is critically important for its usefulness. For photography, the ability to adapt a photo is less important.

This is a way to counteract a potential downside of the abundance of free and open content described above. As Anderson wrote in *Free*, "People often don't care as much about things they don't pay for, and as a result they don't think as much about how they consume

them."[22] If even the tiny act of volition of paying one penny for something changes our perception of that thing, then surely the act of remixing it enhances our perception exponentially.[23] We know that people will pay more for products they had a part in creating.[24] And we know that creating something, no matter what quality, brings with it a type of creative satisfaction that can never be replaced by consuming something created by someone else.[25]

Actively engaging with the content helps us avoid the type of aimless consumption that anyone who has absentmindedly scrolled through their social-media feeds for an hour knows all too well. In his book, *Cognitive Surplus*, Clay Shirky says, "To participate is to act as if your presence matters, as if, when you see something or hear something, your response is part of the event."[26] Opening the door to your content can get people more deeply tied to your work.

Use CC to differentiate yourself

Operating under a traditional copyright regime usually means operating under the rules of establishment players in the media. Business strategies that are embedded in the traditional copyright system, like using digital rights management (DRM) and signing exclusivity contracts, can tie the hands of creators, often at the expense of the creator's best interest.[27] Being **Made with Creative Commons** means you can function without those barriers and, in many cases, use the increased openness as a competitive advantage. David Harris from OpenStax said they specifically pursue strategies they know that traditional publishers cannot. "Don't go into a market and play by the incumbent rules," David said. "Change the rules of engagement."

Making Money

Like any moneymaking endeavor, those that are **Made with Creative Commons** have to generate some type of value for their audience or customers. Sometimes that value is subsidized by funders who are not actually beneficiaries of that value. Funders, whether philanthropic institutions, governments, or concerned individuals, provide money to the organization out of a sense of pure altruism. This is the way traditional nonprofit funding operates.[28] But in many cases, the revenue streams used by endeavors that are **Made with Creative Commons** are directly tied to the value they generate, where the recipient is paying for the value they receive like any standard market transaction. In still other cases, rather than the quid pro quo exchange of money for value that typically drives market transactions, the recipient gives money out of a sense of reciprocity.

Most who are **Made with Creative Commons** use a variety of methods to bring in revenue, some market-based and some not. One common strategy is using grant funding for content creation when research-and-development costs are particularly high, and then finding a different revenue stream (or streams) for ongoing expenses. As Shirky wrote, "The trick is in knowing when markets are an optimal way of organizing interactions and when they are not."[29]

Our case studies explore in more detail the various revenue-generating mechanisms used by the creators, organizations, and businesses we interviewed. There is nuance hidden within the specific ways each of them makes money, so it is a bit dangerous to generalize too much about what we learned. Nonetheless, zooming out and viewing things from a higher level of abstraction can be instructive.

Market-based revenue streams

In the market, the central question when determining how to bring in revenue is what value people are willing to pay for.[30] By definition, if you are **Made with Creative Commons**, the content you provide is available for free and not a market commodity. Like the ubiquitous freemium business model, any possible market transaction with a consumer of your content has to be based on some added value you provide.[31]

In many ways, this is the way of the future for all content-driven endeavors. In the market,

value lives in things that are scarce. Because the Internet makes a universe of content available to all of us for free, it is difficult to get people to pay for content online. The struggling newspaper industry is a testament to this fact. This is compounded by the fact that at least some amount of copying is probably inevitable. That means you may end up competing with free versions of your own content, whether you condone it or not.[32] If people can easily find your content for free, getting people to buy it will be difficult, particularly in a context where access to content is more important than owning it. In *Free*, Anderson wrote, "Copyright protection schemes, whether coded into either law or software, are simply holding up a price against the force of gravity."

Of course, this doesn't mean that content-driven endeavors have no future in the traditional marketplace. In *Free,* Anderson explains how when one product or service becomes free, as information and content largely have in the digital age, other things become more valuable. "Every abundance creates a new scarcity," he wrote. You just have to find some way *other* than the content to provide value to your audience or customers. As Anderson says, "It's easy to compete with Free: simply offer something better or at least different from the free version."[33]

In light of this reality, in some ways endeavors that are **Made with Creative Commons** are at a level playing field with all content-based endeavors in the digital age. In fact, they may even have an advantage because they can use the abundance of content to derive revenue from something scarce. They can also benefit from the goodwill that stems from the values behind being **Made with Creative Commons**.

For content creators and distributors, there are nearly infinite ways to provide value to the consumers of your work, above and beyond the value that lives within your free digital content. Often, the CC-licensed content functions as a marketing tool for the paid product or service.

Here are the most common high-level categories.

MARKET-BASED

Providing a custom service to consumers of your work

In this age of information abundance, we don't lack for content. The trick is finding content that matches our needs and wants, so customized services are particularly valuable. As Anderson wrote, "Commodity information (everybody gets the same version) wants to be free. Customized information (you get something unique and meaningful to you) wants to be expensive."[34] This can be anything from the artistic and cultural consulting services provided by Ártica to the custom-song business of Jonathan "Song-A-Day" Mann.

MARKET-BASED

Charging for the physical copy

In his book about maker culture, Anderson characterizes this model as giving away the bits and selling the atoms (where *bits* refers to digital content and *atoms* refer to a physical object).[35] This is particularly successful in domains where the digital version of the content isn't as valuable as the analog version, like book publishing where a significant subset of people still prefer reading something they can hold in their hands. Or in domains where the content isn't useful until it is in physical form, like furniture designs. In those situations, a significant portion of consumers will pay for the convenience of having someone else put the physical version together for them. Some endeavors squeeze even more out of this revenue stream by using a Creative Commons license that only allows noncommercial uses, which means no one else can sell physical copies of their work in competition with them. This strategy of reserving commercial rights can be particularly important for items like books,

where every printed copy of the same work is likely to be the same quality, so it is harder to differentiate one publishing service from another. On the other hand, for items like furniture or electronics, the provider of the physical goods can compete with other providers of the same works based on quality, service, or other traditional business principles.

MARKET-BASED

Charging for the in-person version

As anyone who has ever gone to a concert will tell you, experiencing creativity in person is a completely different experience from consuming a digital copy on your own. Far from acting as a substitute for face-to-face interaction, CC-licensed content can actually create demand for the in-person version of experience. You can see this effect when people go view original art in person or pay to attend a talk or training course.

MARKET-BASED

Selling merchandise

In many cases, people who like your work will pay for products demonstrating a connection to your work. As a child of the 1980s, I can personally attest to the power of a good concert T-shirt. This can also be an important revenue stream for museums and galleries.

Sometimes the way to find a market-based revenue stream is by providing value to people *other* than those who consume your CC-licensed content. In these revenue streams, the free content is being subsidized by an entirely different category of people or businesses. Often, those people or businesses are paying to access your main audience. The fact that the content is free increases the size of the audience, which in turn makes the offer more valuable to the paying customers. This is a variation of a traditional business model built on free called *multi-sided platforms*.[36] Access to your audience isn't the only thing people are willing to pay for—there are other services you can provide as well.

MARKET-BASED

Charging advertisers or sponsors

The traditional model of subsidizing free content is advertising. In this version of multi-sided platforms, advertisers pay for the opportunity to reach the set of eyeballs the content creators provide in the form of their audience.[37] The Internet has made this model more difficult because the number of potential channels available to reach those eyeballs has become essentially infinite.[38] Nonetheless, it remains a viable revenue stream for many content creators, including those who are **Made with Creative Commons**. Often, instead of paying to display advertising, the advertiser pays to be an official sponsor of particular content or projects, or of the overall endeavor.

MARKET-BASED

Charging your content creators

Another type of multisided platform is where the content creators themselves pay to be featured on the platform. Obviously, this revenue stream is only available to those who rely on work created, at least in part, by others. The most well-known version of this model is the "author-processing charge" of open-access journals like those published by the Public Library of Science, but there are other variations. The Conversation is primarily funded by a university-membership model, where universities pay to have their faculties participate as writers of the content on the Conversation website.

MARKET-BASED

Charging a transaction fee

This is a version of a traditional business model based on brokering transactions between parties.[39] Curation is an important element of this model. Platforms like the Noun Project add value by wading through CC-licensed content to curate a high-quality set and then derive revenue when creators of that content make

transactions with customers. Other platforms make money when service providers transact with their customers; for example, Opendesk makes money every time someone on their site pays a maker to make furniture based on one of the designs on the platform.

MARKET-BASED

Providing a service to your creators
As mentioned above, endeavors can make money by providing customized services to their users. Platforms can undertake a variation of this service model directed at the creators that provide the content they feature. The data platforms Figure.NZ and Figshare both capitalize on this model by providing paid tools to help their users make the data they contribute to the platform more discoverable and reusable.

MARKET-BASED

Licensing a trademark
Finally, some that are **Made with Creative Commons** make money by selling use of their trademarks. Well known brands that consumers associate with quality, credibility, or even an ethos can license that trademark to companies that want to take advantage of that goodwill. By definition, trademarks are scarce because they represent a particular source of a good or service. Charging for the ability to use that trademark is a way of deriving revenue from something scarce while taking advantage of the abundance of CC content.

Reciprocity-based revenue streams

Even if we set aside grant funding, we found that the traditional economic framework of understanding the market failed to fully capture the ways the endeavors we analyzed were making money. It was not simply about monetizing scarcity.

Rather than devising a scheme to get people to pay money in exchange for some direct value provided to them, many of the revenue streams were more about providing value, building a relationship, and then eventually finding some money that flows back out of a sense of reciprocity. While some look like traditional nonprofit funding models, they aren't charity. The endeavor exchange value with people, just not necessarily synchronously or in a way that requires that those values be equal. As David Bollier wrote in *Think Like a Commoner*, "There is no self-serving calculation of whether the value given and received is strictly equal."

This should be a familiar dynamic—it is the way you deal with your friends and family. We give without regard for what and when we will get back. David Bollier wrote, "Reciprocal social exchange lies at the heart of human identity, community and culture. It is a vital brain function that helps the human species survive and evolve."

What is rare is to incorporate this sort of relationship into an endeavor that also engages with the market.[40] We almost can't help but think of relationships in the market as being centered on an even-steven exchange of value.[41]

RECIPROCITY-BASED

Memberships and individual donations
While memberships and donations are traditional nonprofit funding models, in the **Made with Creative Commons** context, they are directly tied to the reciprocal relationship that is cultivated with the beneficiaries of their work. The bigger the pool of those receiving value from the content, the more likely this strategy will work, given that only a small percentage of people are likely to contribute. Since using CC licenses can grease the wheels for content to reach more people, this strategy can be more effective for endeavors that are **Made with Creative Commons**. The greater the argument that the content is a public good or that the entire endeavor is furthering a social mission, the more likely this strategy is to succeed.

The pay-what-you-want model

In the pay-what-you-want model, the beneficiary of Creative Commons content is invited to give—at any amount they can and feel is appropriate, based on the public and personal value they feel is generated by the open content. Critically, these models are not touted as "buying" something free. They are similar to a tip jar. People make financial contributions as an act of gratitude. These models capitalize on the fact that we are naturally inclined to give money for things we value in the marketplace, even in situations where we could find a way to get it for free.

Crowdfunding

Crowdfunding models are based on recouping the costs of creating and distributing content before the content is created. If the endeavor is **Made with Creative Commons,** anyone who wants the work in question could simply wait until it's created and then access it for free. That means, for this model to work, people have to care about more than just receiving the work. They have to want you to succeed. Amanda Palmer credits the success of her crowdfunding on Kickstarter and Patreon to the years she spent building her community and creating a connection with her fans. She wrote in *The Art of Asking*, "Good art is made, good art is shared, help is offered, ears are bent, emotions are exchanged, the compost of real, deep connection is sprayed all over the fields. Then one day, the artist steps up and asks for something. And if the ground has been fertilized enough, the audience says, without hesitation: of course."

Other types of crowdfunding rely on a sense of responsibility that a particular community may feel. Knowledge Unlatched pools funds from major U.S. libraries to subsidize CC-licensed academic work that will be, by definition, available to everyone for free. Libraries with bigger budgets tend to give more out of a sense of commitment to the library community and to the idea of open access generally.

Making Human Connections

Regardless of how they made money, in our interviews, we repeatedly heard language like "persuading people to buy" and "inviting people to pay." We heard it even in connection with revenue streams that sit squarely within the market. Cory Doctorow told us, "I have to convince my readers that the right thing to do is to pay me." The founders of the for-profit company Lumen Learning showed us the letter they send to those who opt not to pay for the services they provide in connection with their CC-licensed educational content. It isn't a cease-and-desist letter; it's an invitation to pay because it's the right thing to do. This sort of behavior toward what could be considered nonpaying customers is largely unheard of in the traditional marketplace. But it seems to be part of the fabric of being **Made with Creative Commons**.

Nearly every endeavor we profiled relied, at least in part, on people being invested in what they do. The closer the Creative Commons content is to being "the product," the more pronounced this dynamic has to be. Rather than simply selling a product or service, they are making ideological, personal, and creative connections with the people who value what they do.

It took me a very long time to see how this avoidance of thinking about what they do in pure market terms was deeply tied to being **Made with Creative Commons**.

I came to the research with preconceived notions about what Creative Commons is and what it means to be **Made with Creative Commons**. It turned out I was wrong on so many counts.

Obviously, being **Made with Creative Commons** means using Creative Commons licenses. That much I knew. But in our interviews, people spoke of so much more than copyright

permissions when they explained how sharing fit into what they do. I was thinking about sharing too narrowly, and as a result, I was missing vast swaths of the meaning packed within Creative Commons. Rather than parsing the specific and narrow role of the copyright license in the equation, it is important not to disaggregate the rest of what comes with sharing. *You have to widen the lens.*

Being **Made with Creative Commons** is not just about the simple act of licensing a copyrighted work under a set of standardized terms, but also about community, social good, contributing ideas, expressing a value system, working together. These components of sharing are hard to cultivate if you think about what you do in purely market terms. Decent social behavior isn't as intuitive when we are doing something that involves monetary exchange. It takes a conscious effort to foster the context for real sharing, based not strictly on impersonal market exchange, but on connections with the people with whom you share—connections with you, with your work, with your values, with each other.

The rest of this section will explore some of the common strategies that creators, companies, and organizations use to remind us that there are humans behind every creative endeavor. To remind us we have obligations to each other. To remind us what sharing really looks like.

Be human

Humans are social animals, which means we are naturally inclined to treat each other well.[42] But the further removed we are from the person with whom we are interacting, the less caring our behavior will be. While the Internet has democratized cultural production, increased access to knowledge, and connected us in extraordinary ways, it can also make it easy forget we are dealing with another human.

To counteract the anonymous and impersonal tendencies of how we operate online, individual creators and corporations who use Creative Commons licenses work to demonstrate their humanity. For some, this means pouring their lives out on the page. For others, it means showing their creative process, giving a glimpse into how they do what they do. As writer Austin Kleon wrote, "*Our work doesn't speak for itself.* Human beings want to know where things came from, how they were made, and who made them. The stories you tell about the work you do have a huge effect on how people feel and what they understand about your work, and how people feel and what they understand about your work affects how they value it."[43]

A critical component to doing this effectively is not worrying about being a "brand." That means not being afraid to be vulnerable. Amanda Palmer says, "When you're afraid of someone's judgment, you can't connect with them. You're too preoccupied with the task of impressing them." Not everyone is suited to live life as an open book like Palmer, and that's OK. There are a lot of ways to be human. The trick is just avoiding pretense and the temptation to artificially craft an image. People don't just want the glossy version of you. They can't relate to it, at least not in a meaningful way.

This advice is probably even more important for businesses and organizations because we instinctively conceive of them as nonhuman (though in the United States, corporations are people!). When corporations and organizations make the people behind them more apparent, it reminds people that they are dealing with something other than an anonymous corporate entity. In business-speak, this is about "humanizing your interactions" with the public.[44] But it can't be a gimmick. You can't fake being human.

Be open and accountable

Transparency helps people understand who you are and why you do what you do, but it also inspires trust. Max Temkin of Cards Against Humanity told us, "One of the most surprising things you can do in capitalism is just be honest with people." That means sharing the good and the bad. As Amanda Palmer wrote, "You can fix almost anything by authentically communicating."[45] It isn't about trying to satis-

fy everyone or trying to sugarcoat mistakes or bad news, but instead about explaining your rationale and then being prepared to defend it when people are critical.[46]

Being accountable does not mean operating on consensus. According to James Surowiecki, consensus-driven groups tend to resort to lowest-common-denominator solutions and avoid the sort of candid exchange of ideas that cultivates healthy collaboration.[47] Instead, it can be as simple as asking for input and then giving context and explanation about decisions you make, even if soliciting feedback and inviting discourse is time-consuming. If you don't go through the effort to actually respond to the input you receive, it can be worse than not inviting input in the first place.[48] But when you get it right, it can guarantee the type of diversity of thought that helps endeavors excel. And it is another way to get people involved and invested in what you do.

Design for the good actors

Traditional economics assumes people make decisions based solely on their own economic self-interest.[49] Any relatively introspective human knows this is a fiction—we are much more complicated beings with a whole range of needs, emotions, and motivations. In fact, we are hardwired to work together and ensure fairness.[50] Being **Made with Creative Commons** requires an assumption that people will largely act on those social motivations, motivations that would be considered "irrational" in an economic sense. As Knowledge Unlatched's Pinter told us, "It is best to ignore people who try to scare you about free riding. That fear is based on a very shallow view of what motivates human behavior." There will always be people who will act in purely selfish ways, but endeavors that are **Made with Creative Commons** design for the good actors.

The assumption that people will largely do the right thing can be a self-fulfilling prophecy. Shirky wrote in *Cognitive Surplus*, "Systems that assume people will act in ways that create public goods, and that give them opportunities and rewards for doing so, often let them work together better than neoclassical economics would predict."[51] When we acknowledge that people are often motivated by something other than financial self-interest, we design our endeavors in ways that encourage and accentuate our social instincts.

Rather than trying to exert control over people's behavior, this mode of operating requires a certain level of trust. We might not realize it, but our daily lives are already built on trust. As Surowiecki wrote in *The Wisdom of Crowds*, "It's impossible for a society to rely on law alone to make sure citizens act honestly and responsibly. And it's impossible for any organization to rely on contracts alone to make sure that its managers and workers live up to their obligation." Instead, we largely trust that people—mostly strangers—will do what they are supposed to do.[52] And most often, they do.

Treat humans like, well, humans

For creators, treating people as humans means not treating them like fans. As Kleon says, "If you want fans, you have to be a fan first."[53] Even if you happen to be one of the few to reach celebrity levels of fame, you are better off remembering that the people who follow your work are human, too. Cory Doctorow makes a point to answer every single email someone sends him. Amanda Palmer spends vast quantities of time going online to communicate with her public, making a point to listen just as much as she talks.[54]

The same idea goes for businesses and organizations. Rather than automating its customer service, the music platform Tribe of Noise makes a point to ensure its employees have personal, one-on-one interaction with users.

When we treat people like humans, they typically return the gift in kind. It's called karma. But social relationships are fragile. It is all too easy to destroy them if you make the mistake of treating people as anonymous customers or free labor.[55] Platforms that rely on content from contributors are especially at risk of creating an exploitative dynamic. It is important to find ways to acknowledge and pay back the

value that contributors generate. That does not mean you can solve this problem by simply paying contributors for their time or contributions. As soon as we introduce money into a relationship—at least when it takes a form of paying monetary value in exchange for other value—it can dramatically change the dynamic.[56]

State your principles and stick to them

Being **Made with Creative Commons** makes a statement about who you are and what you do. The symbolism is powerful. Using Creative Commons licenses demonstrates adherence to a particular belief system, which generates goodwill and connects like-minded people to your work. Sometimes people will be drawn to endeavors that are **Made with Creative Commons** as a way of demonstrating their own commitment to the Creative Commons value system, akin to a political statement. Other times people will identify and feel connected with an endeavor's separate social mission. Often both.

The expression of your values doesn't have to be implicit. In fact, many of the people we interviewed talked about how important it is to state your guiding principles up front. Lumen Learning attributes a lot of their success to having been outspoken about the fundamental values that guide what they do. As a for-profit company, they think their expressed commitment to low-income students and open licensing has been critical to their credibility in the OER (open educational resources) community in which they operate.

When your end goal is not about making a profit, people trust that you aren't just trying to extract value for your own gain. People notice when you have a sense of purpose that transcends your own self-interest.[57] It attracts committed employees, motivates contributors, and builds trust.

Build a community

Endeavors that are **Made with Creative Commons** thrive when community is built around what they do. This may mean a community collaborating together to create something new, or it may simply be a collection of like-minded people who get to know each other and rally around common interests or beliefs.[58] To a certain extent, simply being **Made with Creative Commons** automatically brings with it some element of community, by helping connect you to like-minded others who recognize and are drawn to the values symbolized by using CC.

To be sustainable, though, you have to work to nurture community. People have to care—about you and each other. One critical piece to this is fostering a sense of belonging. As Jono Bacon writes in *The Art of Community*, "If there is no belonging, there is no community." For Amanda Palmer and her band, that meant creating an accepting and inclusive environment where people felt a part of their "weird little family."[59] For organizations like Red Hat, that means connecting around common beliefs or goals. As the CEO Jim Whitehurst wrote in *The Open Organization*, "Tapping into passion is especially important in building the kinds of participative communities that drive open organizations."[60]

Communities that collaborate together take deliberate planning. Surowiecki wrote, "It takes a lot of work to put the group together. It's difficult to ensure that people are working in the group's interest and not in their own. And when there's a lack of trust between the members of the group (which isn't surprising given that they don't really know each other), considerable energy is wasted trying to determine each other's bona fides."[61] Building true community requires giving people within the community the power to create or influence the rules that govern the community.[62] If the rules are created and imposed in a top-down manner, people feel like they don't have a voice, which in turn leads to disengagement.

Community takes work, but working together, or even simply being connected around common interests or values, is in many ways what sharing is about.

Give more to the commons than you take

Conventional wisdom in the marketplace dictates that people should try to extract as much money as possible from resources. This is essentially what defines so much of the so-called sharing economy. In an article on the *Harvard Business Review* website called "The Sharing Economy Isn't about Sharing at All," authors Giana Eckhardt and Fleura Bardhi explained how the anonymous market-driven transactions in most sharing-economy businesses are purely about monetizing access.[63] As Lisa Gansky put it in her book *The Mesh*, the primary strategy of the sharing economy is to sell the same product multiple times, by selling access rather than ownership.[64] That is not sharing.

Sharing requires adding as much or more value to the ecosystem than you take. You can't simply treat open content as a free pool of resources from which to extract value. Part of giving back to the ecosystem is contributing content back to the public under CC licenses. But it doesn't have to just be about creating content; it can be about adding value in other ways. The social blogging platform *Medium* provides value to its community by incentivizing good behavior, and the result is an online space with remarkably high-quality user-generated content and limited trolling.[65] Opendesk contributes to its community by committing to help its designers make money, in part by actively curating and displaying their work on its platform effectively.

In all cases, it is important to openly acknowledge the amount of value you add versus that which you draw on that was created by others. Being transparent about this builds credibility and shows you are a contributing player in the commons. When your endeavor is making money, that also means apportioning financial compensation in a way that reflects the value contributed by others, providing more to contributors when the value they add outweighs the value provided by you.

Involve people in what you do

Thanks to the Internet, we can tap into the talents and expertise of people around the globe. Chris Anderson calls it the Long Tail of talent.[66] But to make collaboration work, the group has to be effective at what it is doing, and the people within the group have to find satisfaction from being involved.[67] This is easier to facilitate for some types of creative work than it is for others. Groups tied together online collaborate best when people can work independently and asynchronously, and particularly for larger groups with loose ties, when contributors can make simple improvements without a particularly heavy time commitment.[68]

As the success of Wikipedia demonstrates, editing an online encyclopedia is exactly the sort of activity that is perfect for massive cocreation because small, incremental edits made by a diverse range of people acting on their own are immensely valuable in the aggregate. Those same sorts of small contributions would be less useful for many other types of creative work, and people are inherently less motivated to contribute when it doesn't appear that their efforts will make much of a difference.[69]

It is easy to romanticize the opportunities for global cocreation made possible by the Internet, and, indeed, the successful examples of it are truly incredible and inspiring. But in a wide range of circumstances—perhaps more often than not—community cocreation is not part of the equation, even within endeavors built on CC content. Shirky wrote, "Sometimes the value of professional work trumps the value of amateur sharing or a feeling of belonging.[70] The textbook publisher OpenStax, which distributes all of its material for free under CC licensing, is an example of this dynamic. Rather than tapping the community to help cocreate their college textbooks, they invest a significant amount of time and money to develop professional content. For individual creators, where the creative work *is* the basis for what they do, community cocreation is only rarely a part of the picture. Even musician Amanda Palmer, who is famous for her openness and involvement with her fans, said, "The only department where I wasn't

open to input was the writing, the music itself."[71]

While we tend to immediately think of co-creation and remixing when we hear the word *collaboration*, you can also involve others in your creative process in more informal ways, by sharing half-baked ideas and early drafts, and interacting with the public to incubate ideas and get feedback. So-called "making in public" opens the door to letting people feel more invested in your creative work.[72] And it shows a nonterritorial approach to ideas and information. Stephen Covey (of *The 7 Habits of Highly Effective People* fame) calls this the *abundance mentality*—treating ideas like something plentiful—and it can create an environment where collaboration flourishes.[73]

There is no one way to involve people in what you do. They key is finding a way for people to contribute on their terms, compelled by their own motivations.[74] What that looks like varies wildly depending on the project. Not every endeavor that is **Made with Creative Commons** can be *Wikipedia*, but every endeavor can find ways to invite the public into what they do. The goal for any form of collaboration is to move away from thinking of consumers as passive recipients of your content and transition them into active participants.[75]

Notes

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4 Chris Anderson, *Free: How Today's Smartest Businesses Profit by Giving Something for Nothing*, reprint with new preface (New York: Hyperion, 2010), 224.

5 Doctorow, *Information Doesn't Want to Be Free*, 44.

6 Amanda Palmer, *The Art of Asking: Or How I Learned to Stop Worrying and Let People Help* (New York: Grand Central, 2014), 121.

7 Chris Anderson, *Makers: The New Industrial Revolution* (New York: Signal, 2012), 64.

8 David Bollier, *Think Like a Commoner: A Short Introduction to the Life of the Commons* (Gabriola Island, BC: New Society, 2014), 70.

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10 Bryan Kramer, *Shareology: How Sharing Is Powering the Human Economy* (New York: Morgan James, 2016), 10.

11 Anderson, *Free*, 62.

12 Doctorow, *Information Doesn't Want to Be Free*, 38.

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14 Anderson, *Free*, 86.

15 Doctorow, *Information Doesn't Want to Be Free*, 144.

16 Anderson, *Free*, 123.

17 Ibid., 132.

18 Ibid., 70.

19 James Surowiecki, *The Wisdom of Crowds* (New York: Anchor Books, 2005), 124. Surowiecki says, "The measure of success of laws and contracts is how rarely they are invoked."

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31 Jim Whitehurst, *The Open Organization: Igniting Passion and Performance* (Boston: Harvard Business Review Press, 2015), 202.

32 Anderson, *Free*, 71.

33 Ibid., 231.

34 Ibid., 97.

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43 Austin Kleon, *Show Your Work: 10 Ways to Share Your Creativity and Get Discovered* (New York: Workman, 2014), 93.

44 Kramer, *Shareology*, 76.

45 Palmer, *Art of Asking*, 252.

46 Whitehurst, *Open Organization*, 145.

47 Surowiecki, *Wisdom of Crowds*, 203.

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62 Bollier, *Think Like a Commoner*, 29.

63 Giana Eckhardt and Fleura Bardhi, "The Sharing Economy Isn't about Sharing at All," *Harvard Business Review* (website), January 28, 2015, hbr.org/2015/01/the-sharing-economy-isnt-about-sharing-at-all.

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68 Whitehurst, foreword to *Open Organization*.

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70 Ibid., 154.

71 Palmer, *Art of Asking*, 163.

72 Anderson, *Makers*, 173.

73 Tom Kelley and David Kelley, *Creative Confidence: Unleashing the Potential within Us All* (New York: Crown, 2013), 82.

74 Whitehurst, foreword to *Open Organization*.

75 Rachel Botsman and Roo Rogers, *What's Mine Is Yours: The Rise of Collaborative Consumption* (New York: Harper Business, 2010), 188.

THE CREATIVE COMMONS LICENSES

3

All of the Creative Commons licenses grant a basic set of permissions. At a minimum, a CC-licensed work can be copied and shared in its original form for noncommercial purposes so long as attribution is given to the creator. There are six licenses in the CC license suite that build on that basic set of permissions, ranging from the most restrictive (allowing only those basic permissions to share unmodified copies for noncommercial purposes) to the most permissive (reusers can do anything they want with the work, even for commercial purposes, as long as they give the creator credit). The licenses are built on copyright and do not cover other types of rights that creators might have in their works, like patents or trademarks.

Here are the six licenses:

The Attribution license (CC BY) lets others distribute, remix, tweak, and build upon your work, even commercially, as long as they credit you for the original creation. This is the most accommodating of licenses offered. Recommended for maximum dissemination and use of licensed materials.

The Attribution-ShareAlike license (CC BY-SA) lets others remix, tweak, and build upon your work, even for commercial purposes, as long as they credit you and license their new creations under identical terms. This license is often compared to "copyleft" free and open source software licenses. All new works based on yours will carry the same license, so any derivatives will also allow commercial use.

The Attribution-NoDerivs license (CC BY-ND) allows for redistribution, commercial and noncommercial, as long as it is passed along unchanged with credit to you.

The Attribution-NonCommercial license (CC BY-NC) lets others remix, tweak, and build upon your work noncommercially. Although their new works must also acknowledge you, they don't have to license their derivative works on the same terms.

The Attribution-NonCommercial-ShareAlike license (CC BY-NC-SA) lets others remix, tweak, and build upon your work noncommercially, as long as they credit you and license their new creations under the same terms.

The Attribution-NonCommercial-NoDerivs license (CC BY-NC-ND) is the most restrictive of our six main licenses, only allowing others to download your works and share them with others as long as they credit you, but they can't change them or use them commercially.

In addition to these six licenses, Creative Commons has two public-domain tools—one for creators and the other for those who manage collections of existing works by authors whose terms of copyright have expired:

CC0 enables authors and copyright owners to dedicate their works to the worldwide public domain ("no rights reserved").

The Creative Commons Public Domain Mark facilitates the labeling and discovery of works that are already free of known copyright restrictions.

In our case studies, some use just one Creative Commons license, others use several. Attribution (found in thirteen case studies) and Attribution-ShareAlike (found in eight studies) were the most common, with the other licenses coming up in four or so case studies, including the public-domain tool CC0. Some of the organizations we profiled offer both digital content and software: by using open-source-software licenses for the software code and Creative Commons licenses for digital content, they amplify their involvement with and commitment to sharing.

There is a popular misconception that the three NonCommercial licenses offered by CC are the only options for those who want to make money off their work. As we hope this book makes clear, there are many ways to make endeavors that are **Made with Creative Commons** sustainable. Reserving commercial rights is only one of those ways. It is certainly true that a license that *allows* others to make commercial use of your work (CC BY, CC BY-SA, and CC BY-ND) forecloses some traditional revenue streams. If you apply an Attribution (CC BY) license to your book, you can't force a film company to pay you royalties if they turn your book into a feature-length film, or prevent another company from selling physical copies of your work.

The decision to choose a NonCommercial and/or NoDerivs license comes down to how much you need to retain control over the creative work. The NonCommercial and NoDerivs licenses are ways of reserving some significant portion of the exclusive bundle of rights that copyright grants to creators. In some cases, reserving those rights is important to how you bring in revenue. In other cases, creators use a NonCommercial or NoDerivs license because they can't give up on the dream of hitting the creative jackpot. The music platform Tribe of Noise told us the NonCommercial licenses were popular among their users because people still held out the dream of having a major record label discover their work.

Other times the decision to use a more restrictive license is due to a concern about the integrity of the work. For example, the nonprofit TeachAIDS uses a NoDerivs license for its educational materials because the medical subject matter is particularly important to get right.

There is no one right way. The NonCommercial and NoDerivs restrictions reflect the values and preferences of creators about how their creative work should be reused, just as the ShareAlike license reflects a different set of values, one that is less about controlling access to their own work and more about ensuring that whatever gets created with their work is available to all on the same terms. Since the beginning of the commons, people have been setting up structures that helped regulate the way in which shared resources were used. The CC licenses are an attempt to standardize norms across all domains.

Note

For more about the licenses including examples and tips on sharing your work in the digital commons, start with the Creative Commons page called “Share Your Work” at creativecommons.org/share-your-work/.

Part 2

THE CASE STUDIES

The twenty-four case studies in this section were chosen from hundreds of nominations received from Kickstarter backers, Creative Commons staff, and the global Creative Commons community. We selected eighty potential candidates that represented a mix of industries, content types, revenue streams, and parts of the world. Twelve of the case studies were selected from that group based on votes cast by Kickstarter backers, and the other twelve were selected by us.

We did background research and conducted interviews for each case study, based on the same set of basic questions about the endeavor. The idea for each case study is to tell the story about the endeavor and the role sharing plays within it, largely the way in which it was told to us by those we interviewed.

ARDUINO

Arduino is a for-profit open-source electronics platform and computer hardware and software company. Founded in 2005 in Italy.

www.arduino.cc

Revenue model: charging for physical copies (sales of boards, modules, shields, and kits), licensing a trademark (fees paid by those who want to sell Arduino products using their name)

Interview date: February 4, 2016
Interviewees: David Cuartielles and Tom Igoe, cofounders

Profile written by Paul Stacey

In 2005, at the Interaction Design Institute Ivrea in northern Italy, teachers and students needed an easy way to use electronics and programming to quickly prototype design ideas. As musicians, artists, and designers, they needed a platform that didn't require engineering expertise. A group of teachers and students, including Massimo Banzi, David Cuartielles, Tom Igoe, Gianluca Martino, and David Mellis, built a platform that combined different open technologies. They called it Arduino. The platform integrated software, hardware, microcontrollers, and electronics. All aspects of the platform were openly licensed: hardware designs and documentation with the Attribution-ShareAlike license (CC BY-SA), and software with the GNU General Public License.

Arduino boards are able to read inputs—light on a sensor, a finger on a button, or a Twitter message—and turn it into outputs—activating a motor, turning on an LED, publishing something online. You send a set of instructions to the microcontroller on the board by using the Arduino programming language and Arduino software (based on a piece of open-source software called Processing, a programming tool used to make visual art).

"The reasons for making Arduino open source are complicated," Tom says. Partly it was about supporting flexibility. The open-source nature of Arduino empowers users to modify it and create a lot of different variations, adding on top of what the founders build. David says this "ended up strengthening the platform far beyond what we had even thought of building."

For Tom another factor was the impending closure of the Ivrea design school. He'd seen other organizations close their doors and all their work and research just disappear. Open-sourcing ensured that Arduino would outlive the Ivrea closure. Persistence is one

thing Tom really likes about open source. If key people leave, or a company shuts down, an open-source product lives on. In Tom's view, "Open sourcing makes it easier to trust a product."

With the school closing, David and some of the other Arduino founders started a consulting firm and multidisciplinary design studio they called Tinker, in London. Tinker designed products and services that bridged the digital and the physical, and they taught people how to use new technologies in creative ways. Revenue from Tinker was invested in sustaining and enhancing Arduino.

For Tom, part of Arduino's success is because the founders made themselves the first customer of their product. They made products they themselves personally wanted. It was a matter of "I need this thing," not "If we make this, we'll make a lot of money." Tom notes that being your own first customer makes you more confident and convincing at selling your product.

Arduino's business model has evolved over time—and Tom says *model* is a grandiose term for it. Originally, they just wanted to make a few boards and get them out into the world. They started out with two hundred boards, sold them, and made a little profit. They used that to make another thousand, which generated enough revenue to make five thousand. In the early days, they simply tried to generate enough funding to keep the venture going day to day. When they hit the ten thousand mark, they started to think about Arduino as a company. By then it was clear you can open-source the design but still manufacture the physical product. As long as it's a quality product and sold at a reasonable price, people will buy it.

Arduino now has a worldwide community of makers—students, hobbyists, artists, programmers, and professionals. Arduino provides a wiki called Playground (a wiki is where all users can edit and add pages, contributing to and benefiting from collective research). People share code, circuit diagrams, tutorials, DIY instructions, and tips and tricks, and show off their projects. In addition, there's a multilanguage discussion forum where users can get help using Arduino, discuss topics like robotics, and make suggestions for new Arduino product designs. As of January 2017, 324,928 members had made 2,989,489 posts on 379,044 topics. The worldwide community of makers has contributed an incredible amount of accessible knowledge helpful to novices and experts alike.

Transitioning Arduino from a project to a company was a big step. Other businesses who made boards were charging a lot of money for them. Arduino wanted to make theirs available at a low price to people across a wide range of industries. As with any business, pricing was key. They wanted prices that would get lots of customers but were also high enough to sustain the business.

For a business, getting to the end of the year and not being in the red is a success. Arduino may have an open-licensing strategy, but they are still a business, and all the things needed to successfully run one still apply. David says, "If you do those other things well, sharing things in an open-source way can only help you."

While openly licensing the designs, documentation, and software ensures longevity, it does have risks. There's a possibility that others will create knockoffs, clones, and copies. The CC BY-SA license means anyone can produce copies of their boards, redesign them, and even sell boards that copy the design. They don't have to pay a license fee to Arduino or even ask permission. However, if they republish the design of the board, they have to give attribution to Arduino. If they change the design, they must release the new design using the same Creative Commons license to ensure that the new version is equally free and open.

Tom and David say that a lot of people have built companies off of Arduino, with dozens of

Arduino derivatives out there. But in contrast to closed business models that can wring money out of the system over many years because there is no competition, Arduino founders saw competition as keeping them honest, and aimed for an environment of collaboration. A benefit of open over closed is the many new ideas and designs others have contributed back to the Arduino ecosystem, ideas and designs that Arduino and the Arduino community use and incorporate into new products.

Over time, the range of Arduino products has diversified, changing and adapting to new needs and challenges. In addition to simple entry level boards, new products have been added ranging from enhanced boards that provide advanced functionality and faster performance, to boards for creating Internet of Things applications, wearables, and 3-D printing. The full range of official Arduino products includes boards, modules (a smaller form-factor of classic boards), shields (elements that can be plugged onto a board to give it extra features), and kits.[1]

THE OPEN-SOURCE NATURE OF ARDUINO EMPOWERS USERS TO MODIFY IT AND CREATE A LOT OF DIFFERENT VARIATIONS, STRENGTHENING THE PLATFORM FAR BEYOND WHAT THE FOUNDERS THOUGHT OF BUILDING.

Arduino's focus is on high-quality boards, well-designed support materials, and the building of community; this focus is one of the keys to their success. And being open lets you build a real community. David says Arduino's community is a big strength and something that really does matter—in his words, "It's good business." When they started, the Arduino team had almost entirely no idea how to build a community. They started by conducting numerous workshops, working directly with people using the platform to make sure the hardware and software worked the way it was meant to work and solved people's problems. The community grew organically from there.

A key decision for Arduino was trademarking the name. The founders needed a way to guarantee to people that they were buying a quality product from a company committed to open-source values and knowledge sharing. Trademarking the Arduino name and logo expresses that guarantee and helps customers easily identify their products, and the products sanctioned by them. If others want to sell boards using the Arduino name and logo, they have to pay a small fee to Arduino. This allows Arduino to scale up manufacturing and distribution while at the same time ensuring the Arduino brand isn't hurt by low-quality copies.

Current official manufacturers are Smart Projects in Italy, SparkFun in the United States, and Dog Hunter in Taiwan/China. These are the only manufacturers that are allowed to use the Arduino logo on their boards. Trademarking their brand provided the founders with a way to protect Arduino, build it out further, and fund software and tutorial development. The trademark-licensing fee for the brand became Arduino's revenue-generating model.

How far to open things up wasn't always something the founders perfectly agreed on. David, who was always one to advocate for opening things up more, had some fears about protecting the Arduino name, thinking people would be mad if they policed their brand. There was some early backlash with

a project called Freeduino, but overall, trademarking and branding has been a critical tool for Arduino.

David encourages people and businesses to start by sharing everything as a default strategy, and then think about whether there is anything that really needs to be protected and why. There are lots of good reasons to not open up certain elements. This strategy of sharing everything is certainly the complete opposite of how today's world operates, where nothing is shared. Tom suggests a business formalize which elements are based on open sharing and which are closed. An Arduino blog post from 2013 entitled "Send In the Clones," by one of the founders Massimo Banzi, does a great job of explaining the full complexities of how trademarking their brand has played out, distinguishing between official boards and those that are clones, derivatives, compatibles, and counterfeits.[2]

For David, an exciting aspect of Arduino is the way lots of people can use it to adapt technology in many different ways. Technology is always making more things possible but doesn't always focus on making it easy to use and adapt. This is where Arduino steps in. Arduino's goal is "making things that help other people make things."

Arduino has been hugely successful in making technology and electronics reach a larger audience. For Tom, Arduino has been about "the democratization of technology." Tom sees Arduino's open-source strategy as helping the world get over the idea that technology has to be protected. Tom says, "Technology is a literacy everyone should learn."

Ultimately, for Arduino, going open has been good business—good for product development, good for distribution, good for pricing, and good for manufacturing.

Web links

1 www.arduino.cc/en/Main/Products
2 blog.arduino.cc/2013/07/10/send-in-the-clones/

ÁRTICA

Ártica provides online courses and consulting services focused on how to use digital technology to share knowledge and enable collaboration in arts and culture. Founded in 2011 in Uruguay.

www.articaonline.com

Revenue model: charging for custom services

Interview date: March 9, 2016
Interviewees: Mariana Fossatti and Jorge Gemetto, cofounders

Profile written by Sarah Hinchliff Pearson

The story of Mariana Fossatti and Jorge Gemetto's business, Ártica, is the ultimate example of DIY. Not only are they successful entrepreneurs, the niche in which their small business operates is essentially one they built themselves.

Their dream jobs didn't exist, so they created them.

In 2011, Mariana was a sociologist working for an international organization to develop research and online education about rural-development issues. Jorge was a psychologist, also working in online education. Both were bloggers and heavy users of social media, and both had a passion for arts and culture. They decided to take their skills in digital technology and online learning and apply them to a topic area they loved. They launched Ártica, an online business that provides education and consulting for people and institutions creating artistic and cultural projects on the Internet.

Ártica feels like a uniquely twenty-first century business. The small company has a global online presence with no physical offices. Jorge and Mariana live in Uruguay, and the other two full-time employees, who Jorge and Mariana have never actually met in person, live in Spain. They started by creating a MOOC (massive open online course) about remix culture and collaboration in the arts, which gave them a direct way to reach an international audience, attracting students from across Latin America and Spain. In other words, it is the classic Internet story of being able to directly tap into an audience without relying upon gatekeepers or intermediaries.

Ártica offers personalized education and consulting services, and helps clients implement projects. All of these services are customized. They call it an "artisan" process because of the time and effort it takes to adapt their work for the particular needs of students

IN THE EDUCATIONAL AND CULTURAL BUSINESS, IT IS MORE IMPORTANT TO PAY ATTENTION TO PEOPLE AND PROCESS, RATHER THAN CONTENT OR SPECIFIC FORMATS OR MATERIALS.

and clients. “Each student or client is paying for a specific solution to his or her problems and questions,” Mariana said. Rather than sell access to their content, they provide it for free and charge for the personalized services.

When they started, they offered a smaller number of courses designed to attract large audiences. “Over the years, we realized that online communities are more specific than we thought,” Mariana said. Ártica now provides more options for classes and has lower enrollment in each course. This means they can provide more attention to individual students and offer classes on more specialized topics.

Online courses are their biggest revenue stream, but they also do more than a dozen consulting projects each year, ranging from digitization to event planning to marketing campaigns. Some are significant in scope, particularly when they work with cultural institutions, and some are smaller projects commissioned by individual artists.

Ártica also seeks out public and private funding for specific projects. Sometimes, even if they are unsuccessful in subsidizing a project like a new course or e-book, they will go ahead because they believe in it. They take the stance that every new project leads them to something new, every new resource they create opens new doors.

Ártica relies heavily on their free Creative Commons–licensed content to attract new students and clients. Everything they create—online education, blog posts, videos—is published under an Attribution-ShareAlike license (CC BY-SA). “We use a ShareAlike license because we want to give the greatest freedom to our students and readers, and we also want that freedom to be viral,” Jorge said. For them, giving others the right to reuse and remix their content is a fundamental value. “How can you offer an online educational service without giving permission to download, make and keep copies, or print the educational resources?” Jorge said. “If we want to do the best for our students—those who trust in us to the point that they are willing to pay online without face-to-face contact—we have to offer them a fair and ethical agreement.”

They also believe sharing their ideas and expertise openly helps them build their reputation and visibility. People often share and cite their work. A few years ago, a publisher even picked up one of their e-books and distributed printed copies. Ártica views reuse of their work as a way to open up new opportunities for their business.

This belief that openness creates new opportunities reflects another belief—in serendipity. When describing their process for creating content, they spoke of all of the spontaneous and organic ways they find inspiration. “Sometimes, the collaborative process starts with a conversation between us, or with friends from other projects,” Jorge said. “That can be the first step for a new blog post or another simple piece of content, which can evolve to a more complex product in the future, like a course or a book.”

Rather than planning their work in advance, they let their creative process be dynamic. “This doesn’t mean that we don’t need to work hard in order to get good professional results, but the design process is more flexible,” Jorge said. They share early and often, and they adjust based on what they learn, always exploring and testing new ideas and ways of operating. In many ways, for them, the process is just as important as the final product.

People and relationships are also just as important, sometimes more. “In the educational and cultural business, it is more important to pay attention to people and process, rather than content or specific formats or materials,” Mariana said. “Materials and content are fluid. The important thing is the relationships.”

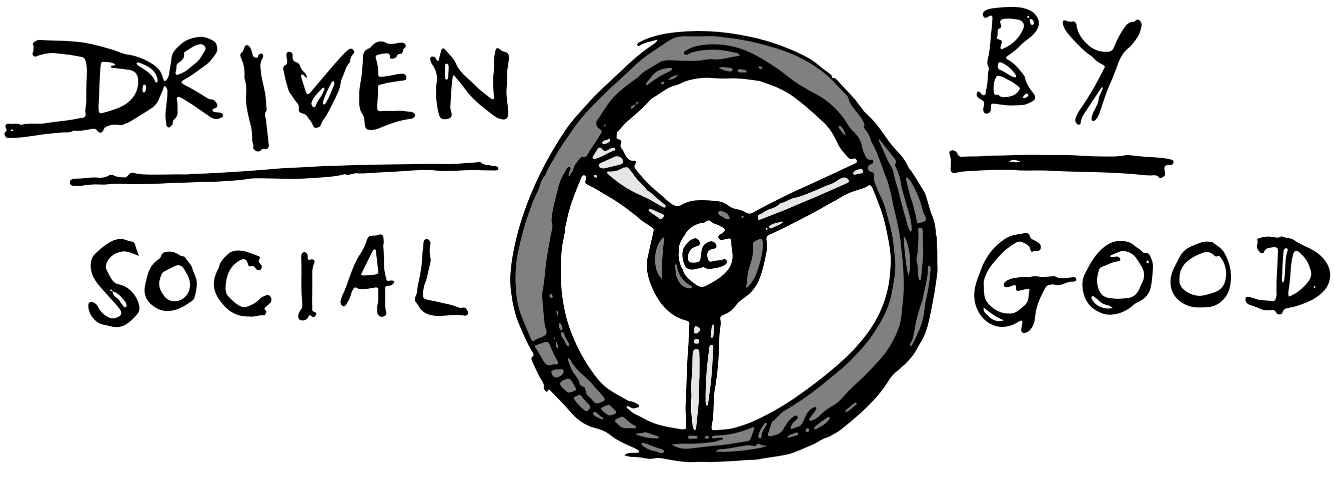
Ártica believes in the power of the network. They seek to make connections with people and institutions across the globe so they can learn from them and share their knowledge.

At the core of everything Ártica does is a set of values. “Good content is not enough,” Jorge said. “We also think that it is very important to take a stand for some things in the cultural sector.” Mariana and Jorge are activists. They defend free culture (the movement promoting the freedom to modify and distribute creative work) and work to demonstrate the intersection between free culture and other social-justice movements. Their efforts to involve people in their work and enable artists and cultural institutions to better use technology are all tied closely to their belief system. Ultimately, what drives their work is a mission to democratize art and culture.

Of course, Ártica also has to make enough money to cover its expenses. Human resources are, by far, their biggest expense. They tap a network of collaborators on a case-by-case basis and hire contractors for specific projects. Whenever possible, they draw from artistic and cultural resources in the commons, and they rely on free software. Their operation is small, efficient, and sustainable, and because of that, it is a success.

“There are lots of people offering online courses,” Jorge said. “But it is easy to differentiate us. We have an approach that is very specific and personal.” Ártica’s model is rooted in the personal at every level. For Mariana and Jorge, success means doing what brings them personal meaning and purpose, and doing it sustainably and collaboratively.

In their work with younger artists, Mariana and Jorge try to emphasize that this model of success is just as valuable as the picture of success we get from the media. “If they seek only the traditional type of success, they will get frustrated,” Mariana said. “We try to show them another image of what it looks like.”


DRIVEN BY
SOCIAL GOOD

BLENDER INSTITUTE

The Blender Institute is an animation studio that creates 3-D films using Blender software. Founded in 2006 in the Netherlands.

www.blender.org

Revenue model: crowdfunding (subscription-based), charging for physical copies, selling merchandise

Interview date: March 8, 2016
Interviewee: Francesco Siddi, production coordinator

Profile written by Sarah Hinchliff Pearson

For Ton Roosendaal, the creator of Blender software and its related entities, sharing is practical. Making their 3-D content creation software available under a free software license has been integral to its development and popularity. Using that software to make movies that were licensed with Creative Commons pushed that development even further. Sharing enables people to participate and to interact with and build upon the technology and content they create in a way that benefits Blender and its community in concrete ways.

Each open-movie project Blender runs produces a host of openly licensed outputs, not just the final film itself but all of the source material as well. The creative process also enhances the development of the Blender software because the technical team responds directly to the needs of the film production team, creating tools and features that make their lives easier. And, of course, each project involves a long, rewarding process for the creative and technical community working together.

Rather than just talking about the theoretical benefits of sharing and free culture, Ton is very much about *doing* and *making* free culture. Blender's production coordinator Francesco Siddi told us, "Ton believes if you don't make content using your tools, then you're not doing anything."

Blender's history begins in the late 1990s, when Ton created the Blender software. Originally, the software was an in-house resource for his animation studio based in the Netherlands. Investors became interested in the software, so he began marketing the software to the public, offering a free version in addition to a paid version. Sales were disappointing, and his investors gave up on the endeavor in the early 2000s. He made a deal with investors—if he could raise enough money, he could then make the Blender software available under the GNU General Public License.

This was long before Kickstarter and other online crowdfunding sites existed, but Ton ran his own version of a crowdfunding campaign and quickly raised the money he needed. The Blender software became freely available for anyone to use. Simply applying the General Public License to the software, however, was not enough to create a thriving community around it. Francesco told us, "Software of this complexity relies on people and their vision of how people work together. Ton is a fantastic community builder and manager, and he put a lot of work into fostering a community of developers so that the project could live."

Like any successful free and open-source software project, Blender developed quickly because the community could make fixes and improvements. "Software should be free and open to hack," Francesco said. "Otherwise, everyone is doing the same thing in the dark for ten years." Ton set up the Blender Foundation to oversee and steward the software development and maintenance.

After a few years, Ton began looking for new ways to push development of the software. He came up with the idea of creating CC-licensed films using the Blender software. Ton put a call online for all interested and skilled artists. Francesco said the idea was to get the best artists available, put them in a building together with the best developers, and have them work together. They would not only produce high-quality openly licensed content, they would improve the Blender software in the process.

They turned to crowdfunding to subsidize the costs of the project. They had about twenty people working full-time for six to ten months, so the costs were significant. Francesco said that when their crowdfunding campaign succeeded, people were astounded. "The idea that making money was possible by producing CC-licensed material was mind-blowing to people," he said. "They were like, 'I have to see it to believe it.'"

The first film, which was released in 2006, was an experiment. It was so successful that Ton decided to set up the Blender Institute, an entity dedicated to hosting open-movie projects. The Blender Institute's next project was an even bigger success. The film, *Big Buck Bunny*, went viral, and its animated characters were picked up by marketers.

Francesco said that, over time, the Blender Institute projects have gotten bigger and more prominent. That means the filmmaking process has become more complex, combining technical experts and artists who focus on storytelling. Francesco says the process is almost on an industrial scale because of the number of moving parts. This requires a lot of specialized assistance, but the Blender Institute has no problem finding the talent it needs to help on projects. "Blender hardly does any recruiting for film projects because the talent emerges naturally," Francesco said. "So many people want to work with us, and we can't always hire them because of budget constraints."

Blender has had a lot of success raising money from its community over the years. In many ways, the pitch has gotten easier to make. Not only is crowdfunding simply more familiar to the public, but people know and trust Blender to deliver, and Ton has developed a reputation as an effective community leader and visionary for their work. "There is a whole community who sees and understands the benefit of these projects," Francesco said.

While these benefits of each open-movie project make a compelling pitch for crowd-

TON BELIEVES IF YOU DON'T MAKE CONTENT USING YOUR TOOLS, THEN YOU'RE NOT DOING ANYTHING.

funding campaigns, Francesco told us the Blender Institute has found some limitations in the standard crowdfunding model where you propose a specific project and ask for funding. "Once a project is over, everyone goes home," he said. "It is great fun, but then it ends. That is a problem."

To make their work more sustainable, they needed a way to receive ongoing support rather than on a project-by-project basis. Their solution is Blender Cloud, a subscription-style crowdfunding model akin to the online crowdfunding platform, Patreon. For about ten euros each month, subscribers get access to download everything the Blender Institute produces—software, art, training, and more. All of the assets are available under an Attribution license (CC BY) or placed in the public domain (CC0), but they are initially made available only to subscribers. Blender Cloud enables subscribers to follow Blender's movie projects as they develop, sharing detailed information and content used in the creative process. Blender Cloud also has extensive training materials and libraries of characters and other assets used in various projects.

The continuous financial support provided by Blender Cloud subsidizes five to six full-time employees at the Blender Institute. Francesco says their goal is to grow their subscriber base. "This is our freedom," he told us, "and for artists, freedom is everything."

Blender Cloud is the primary revenue stream of the Blender Institute. The Blender Foundation is funded primarily by donations, and that money goes toward software development and maintenance. The revenue streams of the Institute and Foundation are deliberately kept separate. Blender also has other revenue streams, such as the Blender Store, where people can purchase DVDs, T-shirts, and other Blender products.

Ton has worked on projects relating to his Blender software for nearly twenty years. Throughout most of that time, he has been committed to making the software and the content produced with the software free and open. Selling a license has never been part of the business model.

Since 2006, he has been making films available along with all of their source material. He says he has hardly ever seen people stepping into Blender's shoes and trying to make money off of their content. Ton believes this is because the true value of what they do is in the creative and production process. "Even when you share everything, all your original sources, it still takes a lot of talent, skills, time, and budget to reproduce what you did," Ton said.

For Ton and Blender, it all comes back to *doing*.

CARDS AGAINST HUMANITY

Cards Against Humanity is a private, for-profit company that makes a popular party game by the same name. Founded in 2011 in the U.S.

www.cardsagainsthumanity.com

Revenue model: charging for physical copies

Interview date: February 3, 2016
Interviewee: Max Temkin, cofounder

Profile written by Sarah Hinchliff Pearson

If you ask cofounder Max Temkin, there is nothing particularly interesting about the Cards Against Humanity business model. “We make a product. We sell it for money. Then we spend less money than we make,” Max said.

He is right. Cards Against Humanity is a simple party game, modeled after the game Apples to Apples. To play, one player asks a question or fill-in-the-blank statement from a black card, and the other players submit their funniest white card in response. The catch is that all of the cards are filled with crude, gruesome, and otherwise awful things. For the right kind of people (“horrible people,” according to Cards Against Humanity advertising), this makes for a hilarious and fun game.

The revenue model is simple. Physical copies of the game are sold for a profit. And it works. At the time of this writing, Cards Against Humanity is the number-one best-selling item out of all toys and games on Amazon. There are official expansion packs available, and several official themed packs and international editions as well.

But Cards Against Humanity is also available for free. Anyone can download a digital version of the game on the Cards Against Humanity website. More than one million people have downloaded the game since the company began tracking the numbers.

The game is available under an Attribution-NonCommercial-ShareAlike license (CC BY-NC-SA). That means, in addition to copying the game, anyone can create new versions of the game as long as they make it available under the same noncommercial terms. The ability to adapt the game is like an entire new game unto itself.

All together, these factors—the crass tone of the game and company, the free download, the openness to fans remixing the game—give the game a massive cult following.

Their success is not the result of a grand plan. Instead, Cards Against Humanity was the last in a long line of games and comedy projects that Max Temkin and his friends put together for their own amusement. As Max tells the story, they made the game so they could play it themselves on New Year's Eve because they were too nerdy to be invited to other parties. The game was a hit, so they decided to put it up online as a free PDF. People started asking if they could pay to have the game printed for them, and eventually they decided to run a Kickstarter to fund the printing. They set their Kickstarter goal at $4,000—and raised $15,000. The game was officially released in May 2011.

The game caught on quickly, and it has only grown more popular over time. Max says the eight founders never had a meeting where they decided to make it an ongoing business. "It kind of just happened," he said.

But this tale of a "happy accident" belies marketing genius. Just like the game, the Cards Against Humanity brand is irreverent and memorable. It is hard to forget a company that calls the FAQ on their website "Your dumb questions."

Like most quality satire, however, there is more to the joke than vulgarity and shock value. The company's marketing efforts around Black Friday illustrate this particularly well. For those outside the United States, Black Friday is the term for the day after the Thanksgiving holiday, the biggest shopping day of the year. It is an incredibly important day for Cards Against Humanity, like it is for all U.S. retailers. Max said they struggled with what to do on Black Friday because they didn't want to support what he called the "orgy of consumerism" the day has become, particularly since it follows a day that is about being grateful for what you have. In 2013, after deliberating, they decided to have an Everything Costs $5 More sale.

"We sweated it out the night before Black Friday, wondering if our fans were going to hate us for it," he said. "But it made us laugh so we went with it. People totally caught the joke."

This sort of bold transparency delights the media, but more importantly, it engages their fans. "One of the most surprising things you can do in capitalism is just be honest with people," Max said. "It shocks people that there is transparency about what you are doing."

Max also likened it to a grand improv scene. "If we do something a little subversive and unexpected, the public wants to be a part of the joke." One year they did a Give Cards Against Humanity $5 event, where people literally paid them five dollars for no reason. Their fans wanted to make the joke funnier by making it successful. They made $70,000 in a single day.

This remarkable trust they have in their customers is what inspired their decision to apply a Creative Commons license to the game. Trusting your customers to reuse and remix your work requires a leap of faith. Cards Against Humanity obviously isn't afraid of doing the unexpected, but there are lines even they do not want to cross. Before applying the license, Max said they worried that some fans would adapt the game to include all of the jokes they intentionally never made because they crossed that line. "It happened, and the world didn't end," Max said. "If that is the worst cost of using CC, I'd pay that a hundred times over because there are so many benefits."

Any successful product inspires its biggest fans to create remixes of it, but unsanctioned adaptations are more likely to fly under the radar. The Creative Commons license gives fans of Cards Against Humanity the freedom to run with the game and copy, adapt, and promote their creations openly. Today there are thousands of fan expansions of the game.

Max said, “CC was a no-brainer for us because it gets the most people involved. Making the game free *and* available under a CC license led to the unbelievable situation where we are one of the best-marketed games in the world, and we have never spent a dime on marketing.”

Of course, there are limits to what the company allows its customers to do with the game. They chose the Attribution-NonCommercial-ShareAlike license because it restricts people from using the game to make money. It also requires that adaptations of the game be made available under the same licensing terms if they are shared publicly. Cards Against Humanity also polices its brand. “We feel like we’re the only ones who can use our brand and our game and make money off of it,” Max said. About 99.9 percent of the time, they just send an email to those making commercial use of the game, and that is the end of it. There have only been a handful of instances where they had to get a lawyer involved.

CC WAS A NO-BRAINER FOR US BECAUSE IT GETS THE MOST PEOPLE INVOLVED. MAKING THE GAME FREE AND AVAILABLE UNDER A CC LICENSE LED TO THE UNBELIEVABLE SITUATION WHERE WE ARE ONE OF THE BEST-MARKETED GAMES IN THE WORLD, AND WE HAVE NEVER SPENT A DIME ON MARKETING.

Just as there is more than meets the eye to the Cards Against Humanity business model, the same can be said of the game itself. To be playable, every white card has to work syntactically with enough black cards. The eight creators invest an incredible amount of work into creating new cards for the game. “We have daylong arguments about commas,” Max said. “The slacker tone of the cards gives people the impression that it is easy to write them, but it is actually a lot of work and quibbling.”

That means cocreation with their fans really doesn’t work. The company has a submission mechanism on their website, and they get thousands of suggestions, but it is very rare that a submitted card is adopted. Instead, the eight initial creators remain the primary authors of expansion decks and other new products released by the company. Interestingly, the creativity of their customer base is really only an asset to the company once their original work is created and published when people make their own adaptations of the game.

For all of their success, the creators of Cards Against Humanity are only partially motivated by money. Max says they have always been interested in the Walt Disney philosophy of financial success. “We don’t make jokes and games to make money—we make money so we can make more jokes and games,” he said.

In fact, the company has given more than $4 million to various charities and causes. “Cards is not our life plan,” Max said. “We all have other interests and hobbies. We are passionate about other things going on in our lives. A lot of the activism we have done comes out of us taking things from the rest of our lives and channeling some of the excitement from the game into it.”

Seeing money as fuel rather than the ultimate goal is what has enabled them to embrace Creative Commons licensing without reservation. CC licensing ended up being a savvy marketing move for the company, but nonetheless, giving up exclusive control of your work necessarily means giving up some opportunities to extract more money from customers.

"It's not right for everyone to release everything under CC licensing," Max said. "If your only goal is to make a lot of money, then CC is not best strategy. *This* kind of business model, though, speaks to your values, and who you are and why you're making things."

THE CONVERSATION

The Conversation is an independent source of news, sourced from the academic and research community and delivered direct to the public over the Internet. Founded in 2011 in Australia.

theconversation.com

Revenue model: charging content creators (universities pay membership fees to have their faculties serve as writers), grant funding

Interview date: February 4, 2016
Interviewee: Andrew Jaspan, founder

Profile written by Paul Stacey

Andrew Jaspan spent years as an editor of major newspapers including the *Observer* in London, the *Sunday Herald* in Glasgow, and the *Age* in Melbourne, Australia. He experienced firsthand the decline of newspapers, including the collapse of revenues, layoffs, and the constant pressure to reduce costs. After he left the *Age* in 2005, his concern for the future journalism didn't go away. Andrew made a commitment to come up with an alternative model.

Around the time he left his job as editor of the Melbourne *Age*, Andrew wondered where citizens would get news grounded in fact and evidence rather than opinion or ideology. He believed there was still an appetite for journalism with depth and substance but was concerned about the increasing focus on the sensational and sexy.

While at the *Age*, he'd become friends with a vice-chancellor of a university in Melbourne who encouraged him to talk to smart people across campus—an astrophysicist, a Nobel laureate, earth scientists, economists . . . These were the kind of smart people he wished were more involved in informing the world about what is going on and correcting the errors that appear in media. However, they were reluctant to engage with mass media. Often, journalists didn't understand what they said, or unilaterally chose what aspect of a story to tell, putting out a version that these people felt was wrong or mischaracterized. Newspapers want to attract a mass audience. Scholars want to com-

municate serious news, findings, and insights. It's not a perfect match.

Universities are massive repositories of knowledge, research, wisdom, and expertise. But a lot of that stays behind a wall of their own making—there are the walled garden and ivory tower metaphors, and in more literal terms, the paywall. Broadly speaking, universities are part of society but disconnected from it. They are an enormous public resource but not that good at presenting their expertise to the wider public.

Andrew believed he could to help connect academics back into the public arena, and maybe help society find solutions to big problems. He thought about pairing professional editors with university and research experts, working one-on-one to refine everything from story structure to headline, captions, and quotes. The editors could help turn something that is academic into something understandable and readable. And this would be a key difference from traditional journalism—the subject matter expert would get a chance to check the article and give final approval before it is published. Compare this with reporters just picking and choosing the quotes and writing whatever they want.

The people he spoke to liked this idea, and Andrew embarked on raising money and support with the help of the Commonwealth Scientific and Industrial Research Organisation (CSIRO), the University of Melbourne, Monash University, the University of Technology Sydney, and the University of Western Australia. These founding partners saw the value of an independent information channel that would also showcase the talent and knowledge of the university and research sector. With their help, in 2011, the Conversation, was launched as an independent news site in Australia. Everything published in the Conversation is openly licensed with Creative Commons.

The Conversation is founded on the belief that underpinning a functioning democracy is access to independent, high-quality, informative journalism. The Conversation's aim is for people to have a better understanding of current affairs and complex issues—and hopefully a better quality of public discourse. The Conversation sees itself as a source of trusted information dedicated to the public good. Their core mission is simple: to provide readers with a reliable source of evidence-based information.

Andrew worked hard to reinvent a methodology for creating reliable, credible content. He introduced strict new working practices, a charter, and codes of conduct.[1] These include fully disclosing who every author is (with their relevant expertise); who is funding their research; and if there are any potential or real conflicts of interest. Also important is where

ACCESS TO INFORMATION IS AN ISSUE OF EQUALITY—EVERYONE SHOULD HAVE ACCESS, LIKE ACCESS TO CLEAN WATER.

the content originates, and even though it comes from the university and research community, it still needs to be fully disclosed.

The Conversation does not sit behind a paywall. Andrew believes access to information is an issue of equality—everyone should have access, like access to clean water. The Conversation is committed to an open and free Internet. Everyone should have free access to their content, and be able to share it or republish it.

Creative Commons help with these goals; articles are published with the Attribution-NoDerivs license (CC BY-ND). They're freely available for others to republish elsewhere as long as attribution is given and the content is not edited. Over five years, more than twenty-two thousand sites have republished their content. The Conversation website gets about 2.9 million unique views per month,

but through republication they have *thirty-five* million readers. This couldn't have been done without the Creative Commons license, and in Andrew's view, Creative Commons is central to everything the Conversation does.

When readers come across the Conversation, they seem to like what they find and recommend it to their friends, peers, and networks. Readership has grown primarily through word of mouth. While they don't have sales and marketing, they do promote their work through social media (including Twitter and Facebook), and by being an accredited supplier to Google News.

It's usual for the founders of any company to ask themselves what kind of company it should be. It quickly became clear to the founders of the Conversation that they wanted to create a public good rather than make money off of information. Most media companies are working to aggregate as many eyeballs as possible and sell ads. The Conversation founders didn't want this model. It takes no advertising and is a not-for-profit venture.

There are now different editions of the Conversation for Africa, the United Kingdom, France, and the United States, in addition to the one for Australia. All five editions have their own editorial mastheads, advisory boards, and content. The Conversation's global virtual newsroom has roughly ninety staff working with thirty-five thousand academics from over sixteen hundred universities around the world. The Conversation would like to be working with university scholars from even more parts of the world.

Additionally, each edition has its own set of founding partners, strategic partners, and funders. They've received funding from foundations, corporates, institutions, and individual donations, but the Conversation is shifting toward paid memberships by universities and research institutions to sustain operations. This would safeguard the current service and help improve coverage and features.

When professors from member universities write an article, there is some branding of the university associated with the article. On the Conversation website, paying university members are listed as "members and funders." Early participants may be designated as "founding members," with seats on the editorial advisory board.

Academics are not paid for their contributions, but they get free editing from a professional (four to five hours per piece, on average). They also get access to a large audience. Every author and member university has access to a special analytics dashboard where they can check the reach of an article. The metrics include what people are tweeting, the comments, countries the readership represents, where the article is being republished, and the number of readers per article.

The Conversation plans to expand the dashboard to show not just reach but impact. This tracks activities, behaviors, and events that occurred as a result of publication, including things like a scholar being asked to go on a show to discuss their piece, give a talk at a conference, collaborate, submit a journal paper, and consult a company on a topic.

These reach and impact metrics show the benefits of membership. With the Conversation, universities can engage with the public and show why they're of value.

With its tagline, "Academic Rigor, Journalistic Flair," the Conversation represents a new form of journalism that contributes to a more informed citizenry and improved democracy around the world. Its open business model and use of Creative Commons show how it's possible to generate both a public good and operational revenue at the same time.

Web link

1 theconversation.com/us/charter

CORY DOCTOROW

Cory Doctorow is a science fiction writer, activist, blogger, and journalist. Based in the U.S.

craphound.com *and* **boingboing.net**

Revenue model: charging for physical copies (book sales), pay-what-you-want, selling translation rights to books

Interview date: January 12, 2016

Profile written by Sarah Hinchliff Pearson

Cory Doctorow hates the term "business model," and he is adamant that he is not a brand. "To me, branding is the idea that you can take a thing that has certain qualities, remove the qualities, and go on selling it," he said. "I'm not out there trying to figure out how to be a brand. I'm doing this thing that animates me to work crazy insane hours because it's the most important thing I know how to do."

Cory calls himself an entrepreneur. He likes to say his success came from making stuff people happened to like and then getting out of the way of them sharing it.

He is a science fiction writer, activist, blogger, and journalist. Beginning with his first novel, *Down and Out in the Magic Kingdom*, in 2003, his work has been published under a Creative Commons license. Cory is coeditor of the popular CC-licensed site *Boing Boing*, where he writes about technology, politics, and intellectual property. He has also written several nonfiction books, including the most recent *Information Doesn't Want to Be Free*, about the ways in which creators can make a living in the Internet age.

Cory primarily makes money by selling physical books, but he also takes on paid speaking gigs and is experimenting with pay-what-you-want models for his work.

While Cory's extensive body of fiction work has a large following, he is just as well known for his activism. He is an outspoken opponent of restrictive copyright and digital-rights-management (DRM) technology used to lock up content because he thinks both undermine creators and the public interest. He is currently a special adviser at the Electronic Frontier Foundation, where he is involved in a lawsuit

challenging the U.S. law that protects DRM. Cory says his political work doesn't directly make him money, but if he gave it up, he thinks he would lose credibility and, more importantly, lose the drive that propels him to create. "My political work is a different expression of the same artistic-political urge," he said. "I have this suspicion that if I gave up the things that didn't make me money, the genuineness would leach out of what I do, and the quality that causes people to like what I do would be gone."

Cory has been financially successful, but money is not his primary motivation. At the start of his book *Information Doesn't Want to Be Free,* he stresses how important it is not to become an artist if your goal is to get rich. "Entering the arts because you want to get rich is like buying lottery tickets because you want to get rich," he wrote. "It might work, but it almost certainly won't. Though, of course, someone always wins the lottery." He acknowledges that he is one of the lucky few to "make it," but he says he would be writing no matter what. "I am *compelled* to write," he wrote. "Long before I wrote to keep myself fed and sheltered, I was writing to keep myself sane."

Just as money is not his primary motivation to create, money is not his primary motivation to share. For Cory, sharing his work with Creative Commons is a moral imperative. "It felt morally right," he said of his decision to adopt Creative Commons licenses. "I felt like I wasn't contributing to the culture of surveillance and censorship that has been created to try to stop copying." In other words, using CC licenses symbolizes his worldview.

He also feels like there is a solid commercial basis for licensing his work with Creative Commons. While he acknowledges he hasn't been able to do a controlled experiment to compare the commercial benefits of licensing with CC against reserving all rights, he thinks he has sold more books using a CC license than he would have without it. Cory says his goal is to convince people they should pay him for his work. "I started by not calling them thieves," he said.

Cory started using CC licenses soon after they were first created. At the time his first novel came out, he says the science fiction genre was overrun with people scanning and downloading books without permission. When he and his publisher took a closer look at who was doing that sort of thing online, they realized it looked a lot like book promotion. "I knew there was a relationship between having enthusiastic readers and having a successful career as a writer," he said. "At the time, it took eighty hours to OCR a book, which is a big effort. I decided to spare them the time and energy, and give them the book for free in a format destined to spread."

Cory admits the stakes were pretty low for him when he first adopted Creative Commons licenses. He only had to sell two thousand copies of his book to break even. People often said he was only able to use CC licenses successfully at that time because he was just starting out. Now they say he can only do it because he is an established author.

The bottom line, Cory says, is that no one has found a way to prevent people from copying the stuff they like. Rather than fighting the tide, Cory makes his work intrinsically shareable. "Getting the hell out of the way for people who want to share their love of you with other people sounds obvious, but it's remarkable how many people don't do it," he said.

Making his work available under Creative Commons licenses enables him to view his biggest fans as his ambassadors. "Being open to fan activity makes you part of the conversation about what fans do with your work and how they interact with it," he said. Cory's own website routinely highlights cool things his audience has done with his work. Unlike corporations like Disney that tend to have a hands-off relationship with their fan activity, he has a symbiotic relationship with his audience. "En-

gaging with your audience can't guarantee you success," he said. "And Disney is an example of being able to remain aloof and still being the most successful company in the creative industry in history. But I figure my likelihood of being Disney is pretty slim, so I should take all the help I can get."

His first book was published under the most restrictive Creative Commons license, Attribution-NonCommercial-NoDerivs (CC BY-NC-ND). It allows only verbatim copying for noncommercial purposes. His later work is published under the Attribution-NonCommercial-ShareAlike license (CC BY-NC-SA), which gives people the right to adapt his work for noncommercial purposes but only if they share it back under the same license terms. Before releasing his work under a CC license that allows adaptations, he always sells the right to translate the book to other languages to a commercial publisher first. He wants to reach new potential buyers in other parts of the world, and he thinks it is more difficult to get people to pay for translations if there are fan translations already available for free.

In his book *Information Doesn't Want to Be Free*, Cory likens his philosophy to thinking like a dandelion. Dandelions produce thousands of seeds each spring, and they are blown into the air going in every direction. The strategy is to maximize the number of blind chances the dandelion has for continuing its genetic line. Similarly, he says there are lots of people out there who may want to buy creative work or compensate authors for it in some other way.

GETTING THE HELL OUT OF THE WAY FOR PEOPLE WHO WANT TO SHARE THEIR LOVE OF YOU WITH OTHER PEOPLE SOUNDS OBVIOUS, BUT IT'S REMARKABLE HOW MANY PEOPLE DON'T DO IT.

"The more places your work can find itself, the greater the likelihood that it will find one of those would-be customers in some unsuspected crack in the metaphorical pavement," he wrote. "The copies that others make of my work cost me nothing, and present the possibility that I'll get something."

Applying a CC license to his work increases the chances it will be shared more widely around the Web. He avoids DRM—and openly opposes the practice—for similar reasons. DRM has the effect of tying a work to a particular platform. This digital lock, in turn, strips the authors of control over their own work and hands that control over to the platform. He calls it Cory's First Law: "Anytime someone puts a lock on something that belongs to you and won't give you the key, that lock isn't there for your benefit."

Cory operates under the premise that artists benefit when there are more, rather than fewer, places where people can access their work. The Internet has opened up those avenues, but DRM is designed to limit them. "On the one hand, we can credibly make our work available to a widely dispersed audience," he said. "On the other hand, the intermediaries we historically sold to are making it harder to go around them." Cory continually looks for ways to reach his audience without relying upon major platforms that will try to take control over his work.

Cory says his e-book sales have been lower than those of his competitors, and he attributes some of that to the CC license making the work available for free. But he believes people are willing to pay for content they like, even when it is available for free, as long as it is easy to do. He was extremely successful using Humble Bundle, a platform that allows people to pay what they want for DRM-free versions of a bundle of a particular creator's work. He is planning to try his own pay-what-you-want experiment soon.

Fans are particularly willing to pay when they feel personally connected to the artist. Cory works hard to create that personal connection. One way he does this is by personally answering every single email he gets. “If you look at the history of artists, most die in penury,” he said. “That reality means that for artists, we have to find ways to support ourselves when public tastes shift, when copyright stops producing. Future-proofing your artistic career in many ways means figuring out how to stay connected to those people who have been touched by your work.”

Cory’s realism about the difficulty of making a living in the arts does not reflect pessimism about the Internet age. Instead, he says the fact that it is hard to make a living as an artist is nothing new. What is new, he writes in his book, “is how many ways there are to make things, and to get them into other people’s hands and minds.”

It has never been easier to think like a dandelion.

FIGSHARE

Figshare is a for-profit company offering an online repository where researchers can preserve and share the output of their research, including figures, data sets, images, and videos. Founded in 2011 in the UK.

figshare.com

Revenue model: platform providing paid services to creators

Interview date: January 28, 2016
Interviewee: Mark Hahnel, founder

Profile written by Paul Stacey

Figshare's mission is to change the face of academic publishing through improved dissemination, discoverability, and reusability of scholarly research. Figshare is a repository where users can make all the output of their research available—from posters and presentations to data sets and code—in a way that's easy to discover, cite, and share. Users can upload any file format, which can then be previewed in a Web browser. Research output is disseminated in a way that the current scholarly-publishing model does not allow.

Figshare founder Mark Hahnel often gets asked: How do you make money? How do we know you'll be here in five years? Can you, as a for-profit venture, be trusted? Answers have evolved over time.

Mark traces the origins of Figshare back to when he was a graduate student getting his PhD in stem cell biology. His research involved working with videos of stem cells in motion. However, when he went to publish his research, there was no way for him to also publish the videos, figures, graphs, and data sets. This was frustrating. Mark believed publishing his complete research would lead to more citations and be better for his career.

Mark does not consider himself an advanced software programmer. Fortunately, things like cloud-based computing and wikis had become mainstream, and he believed it ought to be possible to put all his research online and share it with anyone. So he began working on a solution.

There were two key needs: licenses to make the data citable, and persistent identifiers—URL links that always point back to the original object ensuring the research is citable for the long term.

Mark chose Digital Object Identifiers (DOIs) to meet the need for a persistent identifier. In the DOI system, an object's metadata is stored as a series of numbers in the DOI name. Referring to an object by its DOI is more stable than referring to it by its URL, because the location of an object (the web page or URL) can often

CHANGE THE FACE OF ACADEMIC PUBLISHING THROUGH IMPROVED DISSEMINATION, DISCOVERABILITY, AND REUSABILITY OF SCHOLARLY RESEARCH.

change. Mark partnered with DataCite for the provision of DOIs for research data.

As for licenses, Mark chose Creative Commons. The open-access and open-science communities were already using and recommending Creative Commons. Based on what was happening in those communities and Mark's dialogue with peers, he went with CC0 (in the public domain) for data sets and CC BY (Attribution) for figures, videos, and data sets.

So Mark began using DOIs and Creative Commons for his own research work. He had a science blog where he wrote about it and made all his data open. People started commenting on his blog that they wanted to do the same. So he opened it up for them to use, too.

People liked the interface and simple upload process. People started asking if they could also share theses, grant proposals, and code. Inclusion of code raised new licensing issues, as Creative Commons licenses are not used for software. To allow the sharing of software code, Mark chose the MIT license, but GNU and Apache licenses can also be used.

Mark sought investment to make this into a scalable product. After a few unsuccessful funding pitches, UK-based Digital Science expressed interest but insisted on a more viable business model. They made an initial investment, and together they came up with a freemium-like business model.

Under the freemium model, academics upload their research to Figshare for storage and sharing for free. Each research object is licensed with Creative Commons and receives a DOI link. The *premium* option charges researchers a fee for gigabytes of private storage space, and for private online space designed for a set number of research collaborators, which is ideal for larger teams and geographically dispersed research groups. Figshare sums up its value proposition to researchers as "You retain ownership. You license it. You get credit. We just make sure it persists."

In January 2012, Figshare was launched. (The *fig* in Figshare stands for *figures*.) Using investment funds, Mark made significant improvements to Figshare. For example, researchers could quickly preview their research files within a browser without having to download them first or require third-party software. Journals who were still largely publishing articles as static noninteractive PDFs became interested in having Figshare provide that functionality for them.

Figshare diversified its business model to include services for journals. Figshare began hosting large amounts of data for the journals' online articles. This additional data improved the quality of the articles. Outsourcing this service to Figshare freed publishers from having to develop this functionality as part of their own infrastructure. Figshare-hosted data also provides a link back to the article, generating additional click-through and readership—a benefit to both journal publishers and researchers. Figshare now provides research-data infrastructure for a wide variety of publishers including Wiley, Springer Nature, PLOS, and Taylor and Francis, to name a few, and has convinced them to use Creative Commons licenses for the data.

Governments allocate significant public funds to research. In parallel with the launch of Figshare, governments around the world began requesting the research they fund be open

and accessible. They mandated that researchers and academic institutions better manage and disseminate their research outputs. Institutions looking to comply with this new mandate became interested in Figshare. Figshare once again diversified its business model, adding services for institutions.

Figshare now offers a range of fee-based services to institutions, including their own minibranded Figshare space (called Figshare for Institutions) that securely hosts research data of institutions in the cloud. Services include not just hosting but data metrics, data dissemination, and user-group administration. Figshare's workflow, and the services they offer for institutions, take into account the needs of librarians and administrators, as well as of the researchers.

As with researchers and publishers, Figshare encouraged institutions to share their research with CC BY (Attribution) and their data with CC0 (into the public domain). Funders who require researchers and institutions to use open licensing believe in the social responsibilities and benefits of making research accessible to all. Publishing research in this open way has come to be called open access. But not all funders specify CC BY; some institutions want to offer their researchers a choice, including less permissive licenses like CC BY-NC (Attribution-NonCommercial), CC BY-SA (Attribution-ShareAlike), or CC BY-ND (Attribution-NoDerivs).

For Mark this created a conflict. On the one hand, the principles and benefits of open science are at the heart of Figshare, and Mark believes CC BY is the best license for this. On the other hand, institutions were saying they wouldn't use Figshare unless it offered a choice in licenses. He initially refused to offer anything beyond CC0 and CC BY, but after seeing an open-source CERN project offer all Creative Commons licenses without any negative repercussions, he decided to follow suit.

Mark is thinking of doing a Figshare study that tracks research dissemination according to Creative Commons license, and gathering metrics on views, citations, and downloads. You could see which license generates the biggest impact. If the data showed that CC BY is more impactful, Mark believes more and more researchers and institutions will make it their license of choice.

Figshare has an Application Programming Interface (API) that makes it possible for data to be pulled from Figshare and used in other applications. As an example, Mark shared a Figshare data set showing the journal subscriptions that higher-education institutions in the United Kingdom paid to ten major publishers.[1] Figshare's API enables that data to be pulled into an app developed by a completely different researcher that converts the data into a visually interesting graph, which any viewer can alter by changing any of the variables.[2]

The free version of Figshare has built a community of academics, who through word of mouth and presentations have promoted and spread awareness of Figshare. To amplify and reward the community, Figshare established an Advisor program, providing those who promoted Figshare with hoodies and T-shirts, early access to new features, and travel expenses when they gave presentations outside of their area. These Advisors also helped Mark on what license to use for software code and whether to offer universities an option of using Creative Commons licenses.

Mark says his success is partly about being in the right place at the right time. He also believes that the diversification of Figshare's model over time has been key to success. Figshare now offers a comprehensive set of services to researchers, publishers, and institutions.[3] If he had relied solely on revenue from premium subscriptions, he believes Figshare would have struggled. In Figshare's early days, their primary users were early-career and late-career academics. It has only been because funders mandated open licensing that Figshare is now being used by the mainstream.

Today Figshare has 26 million–plus page views, 7.5 million–plus downloads, 800,000–plus user uploads, 2 million–plus articles, 500,000-plus collections, and 5,000–plus projects. Sixty percent of their traffic comes from Google. A sister company called Altmetric tracks the use of Figshare by others, including Wikipedia and news sources.

Figshare uses the revenue it generates from the premium subscribers, journal publishers, and institutions to fund and expand what it can offer to researchers for free. Figshare has publicly stuck to its principles—keeping the free service free and requiring the use of CC BY and CC0 from the start—and from Mark's perspective, this is why people trust Figshare. Mark sees new competitors coming forward who are just in it for money. If Figshare was only in it for the money, they wouldn't care about offering a free version. Figshare's principles and advocacy for openness are a key differentiator. Going forward, Mark sees Figshare not only as supporting open access to research but also enabling people to collaborate and make new discoveries.

Web links

1 figshare.com/articles/Journal_subscription_costs_FOIs_to_UK_universities/1186832

2 retr0.shinyapps.io/journal_costs/?year=2014&inst=19,22,38,42,59,64,80,95,136

3 figshare.com/features

FIGURE.NZ

Figure.NZ is a nonprofit charity that makes an online data platform designed to make data reusable and easy to understand. Founded in 2012 in New Zealand.

figure.nz

Revenue model: platform providing paid services to creators, donations, sponsorships

Interview date: May 3, 2016
Interviewee: Lillian Grace, founder

Profile written by Paul Stacey

In the paper *Harnessing the Economic and Social Power of Data* presented at the New Zealand Data Futures Forum in 2014,[1] Figure.NZ founder Lillian Grace said there are thousands of valuable and relevant data sets freely available to us right now, but most people don't use them. She used to think this meant people didn't care about being informed, but she's come to see that she was wrong. Almost everyone wants to be informed about issues that matter—not only to them, but also to their families, their communities, their businesses, and their country. But there's a big difference between availability and accessibility of information. Data is spread across thousands of sites and is held within databases and spreadsheets that require both time and skill to engage with. To use data when making a decision, you have to know what specific question to ask, identify a source that has collected the data, and manipulate complex tools to extract and visualize the information within the data set. Lillian established Figure.NZ to make data truly accessible to all, with a specific focus on New Zealand.

Lillian had the idea for Figure.NZ in February 2012 while working for the New Zealand Institute, a think tank concerned with improving economic prosperity, social well-being, environmental quality, and environmental productivity for New Zealand and New Zealanders. While giving talks to community and business groups, Lillian realized "every single issue we addressed would have been easier to deal with if more people understood the basic facts." But understanding the basic facts sometimes requires data and research that you often have to pay for.

Lillian began to imagine a website that lifted data up to a visual form that could be easily understood and freely accessed. Initially launched as Wiki New Zealand, the original idea was that people could contribute their

data and visuals via a wiki. However, few people had graphs that could be used and shared, and there were no standards or consistency around the data and the visuals. Realizing the wiki model wasn't working, Lillian brought the process of data aggregation, curation, and visual presentation in-house, and invested in the technology to help automate some of it. Wiki New Zealand became Figure.NZ, and efforts were reoriented toward providing services to those wanting to open their data and present it visually.

Here's how it works. Figure.NZ sources data from other organizations, including corporations, public repositories, government departments, and academics. Figure.NZ imports and extracts that data, and then validates and standardizes it—all with a strong eye on what will be best for users. They then make the data available in a series of standardized forms, both human- and machine-readable, with rich metadata about the sources, the licenses, and data types. Figure.NZ has a chart-designing tool that makes simple bar, line, and area graphs from any data source. The graphs are posted to the Figure.NZ website, and they can also be exported in a variety of formats for print or online use. Figure.NZ makes its data and graphs available using the Attribution (CC BY) license. This allows others to reuse, revise, remix, and redistribute Figure.NZ data and graphs as long as they give attribution to the original source and to Figure.NZ.

Lillian characterizes the initial decision to use Creative Commons as naively fortunate. It was first recommended to her by a colleague. Lillian spent time looking at what Creative Commons offered and thought it looked good, was clear, and made common sense. It was easy to use and easy for others to understand. Over time, she's come to realize just how fortunate and important that decision turned out to be. New Zealand's government has an open-access and licensing framework called NZGOAL, which provides guidance for agencies when they release copyrighted and noncopyrighted work and material.[2] It aims to standardize the licensing of works with government copyright and how they can be reused, and it does this with Creative Commons licenses. As a result, 98 percent of all government-agency data is Creative Commons licensed, fitting in nicely with Figure.NZ's decision.

Lillian thinks current ideas of what a business is are relatively new, only a hundred years old or so. She's convinced that twenty years from now, we will see new and different models for business. Figure.NZ is set up as a nonprofit charity. It is purpose-driven but also strives to pay people well and thinks like a business. Lillian sees the charity-nonprofit status as an essential element for the mission and purpose of Figure.NZ. She believes Wikipedia would not work if it were for profit, and similarly, Figure.NZ's nonprofit status assures people who have data and people who want to use it that they can rely on Figure.NZ's motives. People see them as a trusted wrangler and source.

Although Figure.NZ is a social enterprise that openly licenses their data and graphs for everyone to use for free, they have taken care not to be perceived as a free service all around the table. Lillian believes hundreds of millions of dollars are spent by the government and organizations to collect data. However, very little money is spent on taking that data and making it accessible, understandable, and useful for decision making. Government uses some of the data for policy, but Lillian believes that it is underutilized and the potential value is much larger. Figure.NZ is focused on solving that problem. They believe a portion of money allocated to collecting data should go into making sure that data is useful and generates value. If the government wants citizens to understand why certain decisions are being made and to be more aware about what the government is doing, why not transform the data it collects into easily understood visuals? It could even become a way for a government or any organization to differentiate, market, and brand itself.

Figure.NZ spends a lot of time seeking to understand the motivations of data collectors and to identify the channels where it can provide value. Every part of their business model has been focused on who is going to get value from the data and visuals.

Figure.NZ has multiple lines of business. They provide commercial services to organizations that want their data publicly available and want to use Figure.NZ as their publishing platform. People who want to publish open data appreciate Figure.NZ's ability to do it faster, more easily, and better than they can. Customers are encouraged to help their users find, use, and make things from the data they make available on Figure.NZ's website. Customers control what is released and the license terms (although Figure.NZ encourages Creative Commons licensing). Figure.NZ also serves customers who want a specific collection of charts created—for example, for their website or annual report. Charging the organizations that want to make their data available enables Figure.NZ to provide their site free to all users, to truly democratize data.

Lillian notes that the current state of most data is terrible and often not well understood by the people who have it. This sometimes makes it difficult for customers and Figure.NZ to figure out what it would cost to import, standardize, and display that data in a useful way. To deal with this, Figure.NZ uses "high-trust contracts," where customers allocate a certain budget to the task that Figure.NZ is then free to draw from, as long as Figure.NZ frequently reports on what they've produced so the customer can determine the value for money. This strategy has helped build trust and transparency about the level of effort associated with doing work that has never been done before.

A second line of business is what Figure.NZ calls *partners*. ASB Bank and Statistics New Zealand are partners who back Figure.NZ's efforts. As one example, with their support Figure.NZ has been able to create Business Figures, a special way for businesses to find useful data without having to know what questions to ask.[3]

Figure.NZ also has patrons.[4] Patrons donate to topic areas they care about, directly enabling Figure.NZ to get data together to flesh out those areas. Patrons do not direct what data is included or excluded.

Figure.NZ also accepts philanthropic donations, which are used to provide more content, extend technology, and improve services, or are targeted to fund a specific effort or provide in-kind support. As a charity, donations are tax deductible.

Figure.NZ has morphed and grown over time. With data aggregation, curation, and visualizing services all in-house, Figure.NZ has developed a deep expertise in taking random styles of data, standardizing it, and making it useful. Lillian realized that Figure.NZ could easily become a warehouse of seventy people doing data. But for Lillian, growth isn't always good. In her view, bigger often means less effective. Lillian set artificial constraints on growth, forcing the organization to think differently and be more efficient. Rather than in-house growth, they are growing and building *external* relationships.

IN THE WORLD WE LIVE IN NOW, THE BEST FUTURE IS THE ONE WHERE EVERYONE CAN MAKE WELL-INFORMED DECISIONS.

Figure.NZ's website displays visuals and data associated with a wide range of categories including crime, economy, education, employment, energy, environment, health, information and communications technology, industry, tourism, and many others. A search function helps users find tables and graphs. Figure.NZ does not provide analysis or interpretation of the data or visuals. Their goal is to

teach people how to think, not think for them. Figure.NZ wants to create intuitive experiences, not user manuals.

Figure.NZ believes data and visuals should be useful. They provide their customers with a data collection template and teach them why it's important and how to use it. They've begun putting more emphasis on tracking what users of their website want. They also get requests from social media and through email for them to share data for a specific topic—for example, can you share data for water quality? If they have the data, they respond quickly; if they don't, they try and identify the organizations that would have that data and forge a relationship so they can be included on Figure.NZ's site. Overall, Figure.NZ is seeking to provide a place for people to be curious about, access, and interpret data on topics they are interested in.

Lillian has a deep and profound vision for Figure.NZ that goes well beyond simply providing open-data services. She says things are different now. "We used to live in a world where it was really hard to share information widely. And in that world, the best future was created by having a few great leaders who essentially had access to the information and made decisions on behalf of others, whether it was on behalf of a country or companies.

"But now we live in a world where it's really easy to share information widely and also to communicate widely. In the world we live in now, the best future is the one where everyone can make well-informed decisions.

"The use of numbers and data as a way of making well-informed decisions is one of the areas where there is the biggest gaps. We don't really use numbers as a part of our thinking and part of our understanding yet.

"Part of the reason is the way data is spread across hundreds of sites. In addition, for the most part, deep thinking based on data is constrained to experts because most people don't have data literacy. There once was a time when many citizens in society couldn't read or write. However, as a society, we've now come to believe that reading and writing skills should be something all citizens have. We haven't yet adopted a similar belief around numbers and data literacy. We largely still believe that only a few specially trained people can analyze and think with numbers.

"Figure.NZ may be the first organization to assert that *everyone* can use numbers in their thinking, and it's built a technological platform along with trust and a network of relationships to make that possible. What you can see on Figure.NZ are tens of thousands of graphs, maps, and data.

"Figure.NZ sees this as a new kind of alphabet that can help people analyze what they see around them. A way to be thoughtful and informed about society. A means of engaging in conversation and shaping decision making that transcends personal experience. The long-term value and impact is almost impossible to measure, but the goal is to help citizens gain understanding and work together in more informed ways to shape the future."

Lillian sees Figure.NZ's model as having global potential. But for now, their focus is completely on making Figure.NZ work in New Zealand and to get the "network effect"—users dramatically increasing value for themselves and for others through use of their service. Creative Commons is core to making the network effect possible.

Web links

1 www.nzdatafutures.org.nz/sites/default/files/NZDFF_harness-the-power.pdf
2 www.ict.govt.nz/guidance-and-resources/open-government/new-zealand-government-open-access-and-licensing-nzgoal-framework/
3 figure.nz/business/
4 figure.nz/patrons/

KNOWLEDGE UNLATCHED

Knowledge Unlatched is a not-for-profit community interest company that brings libraries together to pool funds to publish open-access books. Founded in 2012 in the UK.

knowledgeunlatched.org

Revenue model: crowdfunding (specialized)

Interview date: February 26, 2016
Interviewee: Frances Pinter, founder

Profile written by Paul Stacey

The serial entrepreneur Dr. Frances Pinter has been at the forefront of innovation in the publishing industry for nearly forty years. She founded the UK-based Knowledge Unlatched with a mission to enable open access to scholarly books. For Frances, the current scholarly-book-publishing system is not working for anyone, and especially not for monographs in the humanities and social sciences. Knowledge Unlatched is committed to changing this and has been working with libraries to create a sustainable alternative model for publishing scholarly books, sharing the cost of making monographs (released under a Creative Commons license) and savings costs over the long term. Since its launch, Knowledge Unlatched has received several awards, including the IFLA/Brill Open Access award in 2014 and a Curtin University Commercial Innovation Award for Innovation in Education in 2015.

Dr. Pinter has been in academic publishing most of her career. About ten years ago, she became acquainted with the Creative Commons founder Lawrence Lessig and got interested in Creative Commons as a tool for both protecting content online and distributing it free to users.

Not long after, she ran a project in Africa convincing publishers in Uganda and South Africa to put some of their content online for free using a Creative Commons license and to see what happened to print sales. Sales went up, not down.

In 2008, Bloomsbury Academic, a new imprint of Bloomsbury Publishing in the United Kingdom, appointed her its founding publisher in London. As part of the launch, Frances convinced Bloomsbury to differentiate themselves by putting out monographs for free online under a Creative Commons license (BY-NC or BY-NC-ND, i.e., Attribution-NonCommercial or Attribution-NonCommercial-NoDerivs). This was seen as risky, as the biggest cost for publishers is getting a book to the stage where it can be printed. If everyone read the online book for free, there would be no print-book sales at all, and the costs associated with getting the book to print would be lost. Surprisingly, Bloomsbury found that sales of the print versions of these books were 10 to 20 percent higher than normal. Frances found it intriguing that the Creative Commons–licensed free online book acts as a marketing vehicle for the print format.

Frances began to look at customer interest in the three forms of the book: 1) the Creative Commons–licensed free online book in PDF form, 2) the printed book, and 3) a digital version of the book on an aggregator platform with enhanced features. She thought of this as the "ice cream model": the free PDF was vanilla ice cream, the printed book was an ice cream cone, and the enhanced e-book was an ice cream sundae.

After a while, Frances had an epiphany—what if there was a way to get libraries to underwrite the costs of making these books up until they're ready be printed, in other words, cover the fixed costs of getting to the first digital copy? Then you could either bring down the cost of the printed book, or do a whole bunch of interesting things with the printed book and e-book—the ice cream cone or sundae part of the model.

This idea is similar to the article-processing charge some open-access journals charge researchers to cover publishing costs. Frances began to imagine a coalition of libraries paying for the prepress costs—a "book-processing charge"—and providing everyone in the world with an open-access version of the books released under a Creative Commons license.

This idea really took hold in her mind. She didn't really have a name for it but began talking about it and making presentations to see if there was interest. The more she talked about it, the more people agreed it had appeal. She offered a bottle of champagne to anyone who could come up with a good name for the idea. Her husband came up with Knowledge Unlatched, and after two years of generating interest, she decided to move forward and launch a community interest company (a UK term for not-for-profit social enterprises) in 2012.

She describes the business model in a paper called *Knowledge Unlatched: Toward an Open and Networked Future for Academic Publishing*:

1 Publishers offer titles for sale reflecting origination costs only via Knowledge Unlatched.

2 Individual libraries select titles either as individual titles or as collections (as they do from library suppliers now).

3 Their selections are sent to Knowledge Unlatched specifying the titles to be purchased at the stated price(s).

4 The price, called a Title Fee (set by publishers and negotiated by Knowledge Unlatched), is paid to publishers to cover the fixed costs of publishing each of the titles that were selected by a minimum number of libraries to cover the Title Fee.

5 Publishers make the selected titles available Open Access (on a Creative Commons or similar open license) and are then paid the Title Fee which is the total collected from the libraries.

6 Publishers make print copies, e-Pub, and other digital versions of selected titles available to member libraries at a discount that reflects their contribution to the Title Fee and incentivizes membership.[1]

The first round of this model resulted in a collection of twenty-eight current titles from thirteen recognized scholarly publishers being unlatched. The target was to have two hundred libraries participate. The cost of the package per library was capped at $1,680, which was an average price of sixty dollars per book, but in the end they had nearly three hundred libraries sharing the costs, and the price per book came in at just under forty-three dollars.

The open-access, Creative Commons versions of these twenty-eight books are still available online.[4] Most books have been licensed with CC BY-NC or CC BY-NC-ND. Authors are the copyright holder, not the publisher, and negotiate choice of license as part of the publishing agreement. Frances has found that most authors want to retain control over the commercial and remix use of their work. Publishers list the book in their catalogs, and the noncommercial restriction in the Creative Commons license ensures authors continue to get royalties on sales of physical copies.

There are three cost variables to consider for each round: the overall cost incurred by the publishers, total cost for each library to acquire all the books, and the individual price per book. The fee publishers charge for each title is a fixed charge, and Knowledge Unlatched calculates the total amount for all the books being unlatched at a time. The cost of an order for each library is capped at a maximum based on a minimum number of libraries participating. If the number of participating libraries exceeds the minimum, then the cost of the order and the price per book go down for each library.

The second round, recently completed, unlatched seventy-eight books from twenty-six publishers. For this round, Frances was experimenting with the size and shape of the offerings. Books were being bundled into eight small packages separated by subject (including Anthropology, History, Literature, Media and Communications, and Politics), of around ten books per package. Three hundred libraries around the world have to commit to at least six of the eight packages to enable unlatching. The average cost per book was just under fifty dollars. The unlatching process took roughly ten months. It started with a call to publishers for titles, followed by having a library task force select the titles, getting authors' permissions, getting the libraries to pledge, billing the libraries, and finally, unlatching.

The longest part of the whole process is getting libraries to pledge and commit funds. It takes about five months, as library buy-in has to fit within acquisition cycles, budget cycles, and library-committee meetings.

Knowledge Unlatched informs and recruits libraries through social media, mailing lists, listservs, and library associations. Of the three hundred libraries that participated in the first round, 80 percent are also participating in the second round, and there are an additional eighty new libraries taking part. Knowledge Unlatched is also working not just with individual libraries but also library consortia, which has been getting even more libraries involved.

Knowledge Unlatched is scaling up, offering 150 new titles in the second half of 2016. It will also offer backlist titles, and in 2017 will start to make journals open access too.

Knowledge Unlatched deliberately chose monographs as the initial type of book to unlatch. Monographs are foundational and important, but also problematic to keep going in the standard closed publishing model.

The cost for the publisher to get to a first digital copy of a monograph is $5,000 to $50,000. A good one costs in the $10,000 to $15,000 range. Monographs typically don't sell a lot of

copies. A publisher who in the past sold three thousand copies now typically sells only three hundred. That makes unlatching monographs a low risk for publishers. For the first round, it took five months to get thirteen publishers. For the second round, it took one month to get twenty-six.

Authors don't generally make a lot of royalties from monographs. Royalties range from zero dollars to 5 to 10 percent of receipts. The value to the author is the awareness it brings to them; when their book is being read, it increases their reputation. Open access through unlatching generates many more downloads and therefore awareness. (On the Knowledge Unlatched website, you can find interviews with the twenty-eight round-one authors describing their experience and the benefits of taking part.)[5]

Library budgets are constantly being squeezed, partly due to the inflation of journal subscriptions. But even without budget constraints, academic libraries are moving away from buying physical copies. An academic library catalog entry is typically a URL to wherever the book is hosted. Or if they have enough electronic storage space, they may download the digital file into their digital repository. Only secondarily do they consider getting a print book, and if they do, they buy it separately from the digital version.

Knowledge Unlatched offers libraries a compelling economic argument. Many of the participating libraries would have bought a copy of the monograph anyway, but instead of paying $95 for a print copy or $150 for a digital multiple-use copy, they pay $50 to unlatch. It costs them less, and it opens the book to not just the participating libraries, but to the world.

Not only do the economics make sense, but there is very strong alignment with library mandates. The participating libraries pay less than they would have in the closed model, and the open-access book is available to all libraries. While this means nonparticipating libraries could be seen as free riders, in the library world, wealthy libraries are used to paying more than poor libraries and accept that part of their money should be spent to support open access. "Free ride" is more like community responsibility. By the end of March 2016, the round-one books had been downloaded nearly eighty thousand times in 175 countries.

For publishers, authors, and librarians, the Knowledge Unlatched model for monographs is a win-win-win.

In the first round, Knowledge Unlatched's overheads were covered by grants. In the second round, they aim to demonstrate the model is sustainable. Libraries and publishers will each pay a 7.5 percent service charge that will go toward Knowledge Unlatched's running costs. With plans to scale up in future rounds, Frances figures they can fully recover costs when they are unlatching two hundred books at a time. Moving forward, Knowledge Unlatched is making investments in technology and processes. Future plans include unlatching journals and older books.

Frances believes that Knowledge Unlatched is tapping into new ways of valuing academic content. It's about considering how many people can find, access, and use your content without pay barriers. Knowledge Unlatched taps into the new possibilities and behaviors of the digital world. In the Knowledge Unlatched model, the content-creation process is exactly the same as it always has been, but the economics are different. For Frances, Knowledge Unlatched is connected to the past but moving into the future, an evolution rather than a revolution.

Web links

1 www.pinter.org.uk/pdfs/Toward_an_Open.pdf
2 www.oapen.org
3 www.hathitrust.org
4 collections.knowledgeunlatched.org/collection-availability-1/
5 www.knowledgeunlatched.org/featured-authors-section/

LUMEN LEARNING

Lumen Learning is a for-profit company helping educational institutions use open educational resources (OER). Founded in 2013 in the U.S.

lumenlearning.com

Revenue model: charging for custom services, grant funding

Interview date: December 21, 2015
Interviewees: David Wiley and Kim Thanos, cofounders

Profile written by Paul Stacey

Cofounded by open education visionary Dr. David Wiley and education-technology strategist Kim Thanos, Lumen Learning is dedicated to improving student success, bringing new ideas to pedagogy, and making education more affordable by facilitating adoption of open educational resources. In 2012, David and Kim partnered on a grant-funded project called the Kaleidoscope Open Course Initiative.[1] It involved a set of fully open general-education courses across eight colleges predominantly serving at-risk students, with goals to dramatically reduce textbook costs and collaborate to improve the courses to help students succeed. David and Kim exceeded those goals: the cost of the required textbooks, replaced with OER, decreased to zero dollars, and average student-success rates improved by 5 to 10 percent when compared with previous years. After a second round of funding, a total of more than twenty-five institutions participated in and benefited from this project. It was career changing for David and Kim to see the impact this initiative had on low-income students. David and Kim sought further funding from the Bill and Melinda Gates Foundation, who asked them to define a plan to scale their work in a financially sustainable way. That is when they decided to create Lumen Learning.

David and Kim went back and forth on whether it should be a nonprofit or for-profit. A nonprofit would make it a more comfortable fit with the education sector but meant they'd be constantly fund-raising and seeking grants from philanthropies. Also, grants usually require money to be used in certain ways for specific deliverables. If you learn things along the way that change how you think the grant

money should be used, there often isn't a lot of flexibility to do so.

But as a for-profit, they'd have to convince educational institutions to pay for what Lumen had to offer. On the positive side, they'd have more control over what to do with the revenue and investment money; they could make decisions to invest the funds or use them differently based on the situation and shifting opportunities. In the end, they chose the for-profit status, with its different model for and approach to sustainability.

Right from the start, David and Kim positioned Lumen Learning as a way to help institutions engage in open educational resources, or OER. OER are teaching, learning, and research materials, in all different media, that reside in the public domain or are released under an open license that permits free use and repurposing by others.

Originally, Lumen did custom contracts for each institution. This was complicated and challenging to manage. However, through that process patterns emerged which allowed them to generalize a set of approaches and offerings. Today they don't customize as much as they used to, and instead they tend to work with customers who can use their off-the-shelf options. Lumen finds that institutions and faculty are generally very good at seeing the value Lumen brings and are willing to pay for it. Serving disadvantaged learner populations has led Lumen to be very pragmatic; they describe what they offer in quantitative terms—with facts and figures—and in a way that is very student-focused. Lumen Learning helps colleges and universities—

- replace expensive textbooks in high-enrollment courses with OER;
- provide enrolled students day one access to Lumen's fully customizable OER course materials through the institution's learning-management system;
- measure improvements in student success with metrics like passing rates, persistence, and course completion; and
- collaborate with faculty to make ongoing improvements to OER based on student success research.

Lumen has developed a suite of open, Creative Commons–licensed courseware in more than sixty-five subjects. All courses are freely and publicly available right off their website. They can be copied and used by others as long as they provide attribution to Lumen Learning following the terms of the Creative Commons license.

Then there are three types of bundled services that cost money. One option, which Lumen calls Candela courseware, offers integration with the institution's learning-management system, technical and pedagogical support, and tracking of effectiveness. Candela courseware costs institutions ten dollars per enrolled student.

A second option is Waymaker, which offers the services of Candela but adds personalized learning technologies, such as study plans, automated messages, and assessments, and helps instructors find and support the students who need it most. Waymaker courses cost twenty-five dollars per enrolled student.

The third and emerging line of business for Lumen is providing guidance and support for institutions and state systems that are pursuing the development of complete OER degrees. Often called Z-Degrees, these programs eliminate textbook costs for students in all courses that make up the degree (both required and elective) by replacing commercial textbooks and other expensive resources with OER.

Lumen generates revenue by charging for their value-added tools and services on top of their free courses, just as solar-power companies provide the tools and services that help people use a free resource—sunlight. And Lumen's business model focuses on getting the institutions to pay, not the students. With projects they did prior to Lumen, David and Kim

learned that students who have access to all course materials from day one have greater success. If students had to pay, Lumen would have to restrict access to those who paid. Right from the start, their stance was that they would not put their content behind a paywall. Lumen invests zero dollars in technologies and processes for restricting access—no digital rights management, no time bombs. While this has been a challenge from a business-model perspective, from an open-access perspective, it has generated immense goodwill in the community.

In most cases, development of their courses is funded by the institution Lumen has a contract with. When creating new courses, Lumen typically works with the faculty who are teaching the new course. They're often part of the institution paying Lumen, but sometimes Lumen has to expand the team and contract faculty from other institutions. First, the faculty identifies all of the course's learning outcomes. Lumen then searches for, aggregates, and curates the best OER they can find that addresses those learning needs, which the faculty reviews.

Sometimes faculty like the existing OER but not the way it is presented. The open licensing of existing OER allows Lumen to pick and choose from images, videos, and other media to adapt and customize the course. Lumen creates new content as they discover gaps in existing OER. Test-bank items and feedback for students on their progress are areas where new content is frequently needed. Once a course is created, Lumen puts it on their platform with all the attributions and links to the original sources intact, and any of Lumen's new content is given an Attribution (CC BY) license.

Using only OER made them experience firsthand how complex it could be to mix differently licensed work together. A common strategy with OER is to place the Creative Commons license and attribution information in the website's footer, which stays the same for all pages. This doesn't quite work, however, when mixing different OER together.

Remixing OER often results in multiple attributions on every page of every course—text from one place, images from another, and videos from yet another. Some are licensed as Attribution (CC BY), others as Attribution-ShareAlike (CC BY-SA). If this information is put within the text of the course, faculty members sometimes try to edit it and students find it a distraction. Lumen dealt with this challenge by capturing the license and attribution information as metadata, and getting it to show up at the end of each page.

Lumen's commitment to open licensing and helping low-income students has led to strong relationships with institutions, open-education enthusiasts, and grant funders. People in their network generously increase the visibility of Lumen through presentations, word of mouth, and referrals. Sometimes the number of general inquiries exceed Lumen's sales capacity.

To manage demand and ensure the success of projects, their strategy is to be proactive and focus on what's going on in higher education in different regions of the United States, watching out for things happening at the system level in a way that fits with what Lumen offers. A great example is the Virginia community college system, which is building out Z-Degrees. David and Kim say there are nine other U.S. states with similar system-level activity where Lumen is strategically focusing its efforts. Where there are projects that would require a lot of resources on Lumen's part, they prioritize the ones that would impact the largest number of students.

As a business, Lumen is committed to openness. There are two core nonnegotiables: Lumen's use of CC BY, the most permissive of the

Creative Commons licenses, for all the materials it creates; and day-one access for students. Having clear nonnegotiables allows them to then engage with the education community to solve for other challenges and work with institutions to identify new business models that achieve institution goals, while keeping Lumen healthy.

Openness also means that Lumen's OER must necessarily be nonexclusive and nonrivalrous. This represents several big challenges for the business model: Why should you invest in creating something that people will be reluctant to pay for? How do you ensure that the investment the diverse education community makes in OER is not exploited? Lumen thinks we all need to be clear about how we are benefiting from and contributing to the open community.

In the OER sector, there are examples of corporations, and even institutions, acting as free riders. Some simply take and use open resources without paying anything or contributing anything back. Others give back the minimum amount so they can save face. Sustainability will require those using open resources to give back an amount that seems fair or even give back something that is generous.

Lumen does track institutions accessing and using their free content. They proactively contact those institutions, with an estimate of how much their students are saving and encouraging them to switch to a paid model. Lumen explains the advantages of the paid model: a more interactive relationship with Lumen; integration with the institution's learning-management system; a guarantee of support for faculty and students; and future sustainability with funding supporting the evolution and improvement of the OER they are using.

Lumen works hard to be a good corporate citizen in the OER community. For David and Kim, a good corporate citizen gives more than they take, adds unique value, and is very transparent about what they are taking from community, what they are giving back, and what they are monetizing. Lumen believes these are the building blocks of a sustainable model and strives for a correct balance of all these factors.

Licensing all the content they produce with CC BY is a key part of giving more value than they take. They've also worked hard at finding the right structure for their value-add and how to package it in a way that is understandable and repeatable.

As of the fall 2016 term, Lumen had eighty-six different open courses, working relationships with ninety-two institutions, and more than seventy-five thousand student enrollments. Lumen received early start-up funding from the Bill and Melinda Gates Foundation, the Hewlett Foundation, and the Shuttleworth Foundation. Since then, Lumen has also attracted investment funding. Over the last three years, Lumen has been roughly 60 percent grant funded, 20 percent revenue earned, and 20 percent funded with angel capital. Going forward, their strategy is to replace grant funding with revenue.

In creating Lumen Learning, David and Kim say they've landed on solutions they never imagined, and there is still a lot of learning taking place. For them, open business models are an emerging field where we are all learning through sharing. Their biggest recommendations for others wanting to pursue the open model are to make your commitment to open resources public, let people know where you stand, and don't back away from it. It really is about trust.

Web link

1 lumenlearning.com/innovative-projects/

JONATHAN MANN

Jonathan Mann is a singer and songwriter who is most well known as the “Song A Day” guy. Based in the U.S.

jonathanmann.net and **jonathanmann.bandcamp.com**

Revenue model: charging for custom services, pay-what-you-want, crowdfunding (subscription-based), charging for in-person version (speaking engagements and musical performances)

Interview date: February 22, 2016

Profile written by Sarah Hinchliff Pearson

Jonathan Mann thinks of his business model as “hustling”—seizing nearly every opportunity he sees to make money. The bulk of his income comes from writing songs under commission for people and companies, but he has a wide variety of income sources. He has supporters on the crowdfunding site Patreon. He gets advertising revenue from YouTube and Bandcamp, where he posts all of his music. He gives paid speaking engagements about creativity and motivation. He has been hired by major conferences to write songs summarizing what speakers have said in the conference sessions.

His entrepreneurial spirit is coupled with a willingness to take action quickly. A perfect illustration of his ability to act fast happened in 2010, when he read that Apple was having a conference the following day to address a snafu related to the iPhone 4. He decided to write and post a song about the iPhone 4 that day, and the next day he got a call from the public relations people at Apple wanting to use and promote his video at the Apple conference. The song then went viral, and the experience landed him in *Time* magazine.

Jonathan’s successful “hustling” is also about old-fashioned persistence. He is currently in his eighth straight year of writing one song each day. He holds the Guinness World Record for consecutive daily songwriting, and he is widely known as the “song-a-day guy.”

He fell into this role by, naturally, seizing a random opportunity a friend alerted him to seven years ago—an event called Fun-A-Day, where people are supposed to create a piece of art every day for thirty-one days straight. He was in need of a new project, so he decided to give it a try by writing and posting a song each day. He added a video component to the songs because he knew people were more likely to watch video online than simply listening to audio files.

He had a really good time doing the thirty-one-day challenge, so he decided to see if he could continue it for one year. He never stopped. He has written and posted a new song literally every day, seven days a week, since he began the project in 2009. When he isn't writing songs that he is hired to write by clients, he writes songs about whatever is on his mind that day. His songs are catchy and mostly lighthearted, but they often contain at least an undercurrent of a deeper theme or meaning. Occasionally, they are extremely personal, like the song he cowrote with his exgirlfriend announcing their breakup. Rain or shine, in sickness or health, Jonathan posts and writes a song every day. If he is on a flight or otherwise incapable of getting Internet access in time to meet the deadline, he will prepare ahead and have someone else post the song for him.

Over time, the song-a-day gig became the basis of his livelihood. In the beginning, he made money one of two ways. The first was by entering a wide variety of contests and winning a handful. The second was by having the occasional song and video go some varying degree of viral, which would bring more eyeballs and mean that there were more people wanting him to write songs for them. Today he earns most of his money this way.

His website explains his gig as "taking any message, from the super simple to the totally complicated, and conveying that message through a heartfelt, fun and quirky song." He charges $500 to create a produced song and $300 for an acoustic song. He has been hired for product launches, weddings, conferences, and even Kickstarter campaigns like the one that funded the production of this book.

Jonathan can't recall when exactly he first learned about Creative Commons, but he began applying CC licenses to his songs and videos as soon as he discovered the option. "CC seems like such a no-brainer," Jonathan said. "I don't understand how anything else would make sense. It seems like such an obvious thing that you would want your work to be able to be shared."

His songs are essentially marketing for his services, so obviously the further his songs spread, the better. Using CC licenses helps grease the wheels, letting people know that Jonathan allows and encourages them to copy, interact with, and remix his music. "If you let someone cover your song or remix it or use parts of it, that's how music is supposed to work," Jonathan said. "That is how music has worked since the beginning of time. Our me-me, mine-mine culture has undermined that."

There are some people who cover his songs fairly regularly, and he would never shut that down. But he acknowledges there is a lot more he could do to build community. "There is all of this conventional wisdom about how to build an audience online, and I generally think I don't do any of that," Jonathan said.

He does have a fan community he cultivates on Bandcamp, but it isn't his major focus. "I do have a core audience that has stuck around for a really long time, some even longer than I've been doing song-a-day," he said. "There is also a transitional aspect that drop in and get what they need and then move on." Focusing less on community building than other artists makes sense given Jonathan's primary income source of writing custom songs for clients.

Jonathan recognizes what comes naturally to him and leverages those skills. Through the practice of daily songwriting, he realized he has a gift for distilling complicated subjects into simple concepts and putting them to music. In his song "How to Choose a Master Password,"

IT SEEMS LIKE SUCH AN OBVIOUS THING THAT YOU WOULD WANT YOUR WORK TO BE ABLE TO BE SHARED.

Jonathan explained the process of creating a secure password in a silly, simple song. He was hired to write the song by a client who handed him a long technical blog post from which to draw the information. Like a good (and rare) journalist, he translated the technical concepts into something understandable.

When he is hired by a client to write a song, he first asks them to send a list of talking points and other information they want to include in the song. He puts all of that into a text file and starts moving things around, cutting and pasting until the message starts to come together. The first thing he tries to do is grok the core message and develop the chorus. Then he looks for connections or parts he can make rhyme. The entire process really does resemble good journalism, but of course the final product of his work is a song rather than news. “There is something about being challenged and forced to take information that doesn’t seem like it should be sung about or doesn’t seem like it lends itself to a song,” he said. “I find that creative challenge really satisfying. I enjoy getting lost in that process.”

Jonathan admits that in an ideal world, he would exclusively write the music he wanted to write, rather than what clients hire him to write. But his business model is about capitalizing on his strengths as a songwriter, and he has found a way to keep it interesting for himself.

Jonathan uses nearly every tool possible to make money from his art, but he does have lines he won’t cross. He won’t write songs about things he fundamentally does not believe in, and there are times he has turned down jobs on principle. He also won’t stray too much from his natural style. “My style is silly, so I can’t really accommodate people who want something super serious,” Jonathan said. “I do what I do very easily, and it’s part of who I am.” Jonathan hasn’t gotten into writing commercials for the same reasons; he is best at using his own unique style rather than mimicking others.

Jonathan’s song-a-day commitment exemplifies the power of habit and grit. Conventional wisdom about creative productivity, including advice in books like the best-seller *The Creative Habit* by Twyla Tharp, routinely emphasizes the importance of ritual and action. No amount of planning can replace the value of simple practice and just *doing.* Jonathan Mann’s work is a living embodiment of these principles.

When he speaks about his work, he talks about how much the song-a-day process has changed him. Rather than seeing any given piece of work as precious and getting stuck on trying to make it perfect, he has become comfortable with just doing. If today’s song is a bust, tomorrow’s song might be better.

Jonathan seems to have this mentality about his career more generally. He is constantly experimenting with ways to make a living while sharing his work as widely as possible, seeing what sticks. While he has major accomplishments he is proud of, like being in the *Guinness World Records* or having his song used by Steve Jobs, he says he never truly feels successful.

“Success feels like it’s over,” he said. “To a certain extent, a creative person is not ever going to feel completely satisfied because then so much of what drives you would be gone.”

NOUN PROJECT

The Noun Project is a for-profit company offering an online platform to display visual icons from a global network of designers. Founded in 2010 in the U.S.

thenounproject.com

Revenue model: charging a transaction fee, charging for custom services

Interview date: October 6, 2015
Interviewee: Edward Boatman, cofounder

Profile written by Paul Stacey

The Noun Project creates and shares visual language. There are millions who use Noun Project symbols to simplify communication across borders, languages, and cultures.

The original idea for the Noun Project came to cofounder Edward Boatman while he was a student in architecture design school. He'd always done a lot of sketches and started to draw what used to fascinate him as a child, like trains, sequoias, and bulldozers. He began thinking how great it would be if he had a simple image or small icon of every single object or concept on the planet.

When Edward went on to work at an architecture firm, he had to make a lot of presentation boards for clients. But finding high-quality sources for symbols and icons was difficult. He couldn't find any website that could provide them. Perhaps his idea for creating a library of icons could actually help people in similar situations.

With his partner, Sofya Polyakov, he began collecting symbols for a website and writing a business plan. Inspiration came from the book *Professor and the Madman*, which chronicles the use of crowdsourcing to create the *Oxford English Dictionary* in 1870. Edward began to imagine crowdsourcing icons and symbols from volunteer designers around the world.

Then Edward got laid off during the recession, which turned out to be a huge catalyst. He decided to give his idea a go, and in 2010 Edward and Sofya launched the Noun Project with a Kickstarter campaign, back when

Kickstarter was in its infancy.[1] They thought it'd be a good way to introduce the global web community to their idea. Their goal was to raise $1,500, but in twenty days they got over $14,000. They realized their idea had the potential to be something much bigger.

They created a platform where symbols and icons could be uploaded, and Edward began recruiting talented designers to contribute their designs, a process he describes as a relatively easy sell. Lots of designers have old drawings just gathering "digital dust" on their hard drives. It's easy to convince them to finally share them with the world.

The Noun Project currently has about seven thousand designers from around the world. But not all submissions are accepted. The Noun Project's quality-review process means that only the best works become part of its collection. They make sure to provide encouraging, constructive feedback whenever they reject a piece of work, which maintains and builds the relationship they have with their global community of designers.

Creative Commons is an integral part of the Noun Project's business model; this decision was inspired by Chris Anderson's book *Free: The Future of Radical Price*, which introduced Edward to the idea that you could build a business model around free content.

Edward knew he wanted to offer a *free* visual language while still providing some protection and reward for its contributors. There is a tension between those two goals, but for Edward, Creative Commons licenses bring this idealism and business opportunity together elegantly. He chose the Attribution (CC BY) license, which means people can download the icons for free and modify them and even use them commercially. The requirement to give attribution to the original creator ensures that the creator can build a reputation and get global recognition for their work. And if they simply want to offer an icon that people can use without having to give credit, they can use CC0 to put the work into the public domain.

Noun Project's business model and means of generating revenue have evolved significantly over time. Their initial plan was to sell T-shirts with the icons on it, which in retrospect Edward says was a horrible idea. They did get a lot of email from people saying they loved the icons but asking if they could pay a fee instead of giving attribution. Ad agencies (among others) wanted to keep marketing and presentation materials clean and free of attribution statements. For Edward, "That's when our lightbulb went off."

They asked their global network of designers whether they'd be open to receiving modest remuneration instead of attribution. Designers saw it as a win-win. The idea that you could offer your designs for free and have a global audience *and* maybe even make some money was pretty exciting for most designers.

The Noun Project first adopted a model whereby using an icon without giving attribution would cost $1.99 per icon. The model's second iteration added a subscription component, where there would be a monthly fee to access a certain number of icons—ten, fifty, a hundred, or five hundred. However, users didn't like these hard-count options. They preferred to try out many similar icons to see which worked best before eventually choosing the one they wanted to use. So the Noun Project moved to an unlimited model, whereby users have unlimited access to the whole library for a flat monthly fee. This service is called NounPro and costs $9.99 per month. Edward says this model is working well—good for customers, good for creators, and good for the platform.

Customers then began asking for an application-programming interface (API), which would allow Noun Project icons and symbols to be directly accessed from within other applications. Edward knew that the icons and symbols would be valuable in a lot of different

contexts and that they couldn't possibly know all of them in advance, so they built an API with a lot of flexibility. Knowing that most API applications would want to use the icons without giving attribution, the API was built with the aim of charging for its use. You can use what's called the "Playground API" for free to test how it integrates with your application, but full implementation will require you to purchase the API Pro version.

The Noun Project shares revenue with its international designers. For one-off purchases, the revenue is split 70 percent to the designer and 30 percent to Noun Project.

THE NOUN PROJECT'S SUCCESS LIES IN CREATING SERVICES AND CONTENT THAT ARE A STRATEGIC MIX OF FREE AND PAID WHILE STAYING TRUE TO THEIR MISSION—CREATING, SHARING, AND CELEBRATING THE WORLD'S VISUAL LANGUAGE.

The revenue from premium purchases (the subscription and API options) is split a little differently. At the end of each month, the total revenue from subscriptions is divided by Noun Project's total number of downloads, resulting in a rate per download—for example, it could be $0.13 per download for that month. For each download, the revenue is split 40 percent to the designer and 60 percent to the Noun Project. (For API usage, it's per use instead of per download.) Noun Project's share is higher this time as it's providing more service to the user.

The Noun Project tries to be completely transparent about their royalty structure.[2] They tend to over communicate with creators about it because building trust is the top priority.

For most creators, contributing to the Noun Project is not a full-time job but something they do on the side. Edward categorizes monthly earnings for creators into three broad categories: enough money to buy beer; enough to pay the bills; and most successful of all, enough to pay the rent.

Recently the Noun Project launched a new app called Lingo. Designers can use Lingo to organize not just their Noun Project icons and symbols but also their photos, illustrations, UX designs, et cetera. You simply drag any visual item directly into Lingo to save it. Lingo also works for teams so people can share visuals with each other and search across their combined collections. Lingo is free for personal use. A pro version for $9.99 per month lets you add guests. A team version for $49.95 per month allows up to twenty-five team members to collaborate, and to view, use, edit, and add new assets to each other's collections. And if you subscribe to NounPro, you can access Noun Project from within Lingo.

The Noun Project gives a ton of value away for free. A very large percentage of their roughly one million members have a free account, but there are still lots of paid accounts coming from digital designers, advertising and design agencies, educators, and others who need to communicate ideas visually.

For Edward, "creating, sharing, and celebrating the world's visual language" is the most important aspect of what they do; it's their stated mission. It differentiates them from others who offer graphics, icons, or clip art.

Noun Project creators agree. When surveyed on why they participate in the Noun Project, this is how designers rank their reasons: 1) to support the Noun Project mission, 2) to promote their own personal brand, and 3) to generate money. It's striking to see that money comes third, and mission, first. If you want to engage a global network of contributors, it's important to have a mission beyond making money.

In Edward's view, Creative Commons is central to their mission of sharing and social good. Using Creative Commons makes the Noun Project's mission genuine and has generated a lot of their initial traction and credibility. CC comes with a built-in community of users and fans.

Edward told us, "Don't underestimate the power of a passionate community around your product or your business. They are going to go to bat for you when you're getting ripped in the media. If you go down the road of choosing to work with Creative Commons, you're taking the first step to building a great community and tapping into a really awesome community that comes with it. But you need to continue to foster that community through other initiatives and continue to nurture it."

The Noun Project nurtures their creators' second motivation—promoting a personal brand—by connecting every icon and symbol to the creator's name and profile page; each profile features their full collection. Users can also search the icons by the creator's name.

The Noun Project also builds community through Iconathons—hackathons for icons.[2] In partnership with a sponsoring organization, the Noun Project comes up with a theme (e.g., sustainable energy, food bank, guerrilla gardening, human rights) and a list of icons that are needed, which designers are invited to create at the event. The results are vectorized, and added to the Noun Project using CC0 so they can be used by anyone for free.

Providing a free version of their product that satisfies a lot of their customers' needs has actually enabled the Noun Project to build the paid version, using a service-oriented model. The Noun Project's success lies in creating services and content that are a strategic mix of free and paid while staying true to their mission—creating, sharing, and celebrating the world's visual language. Integrating Creative Commons into their model has been key to that goal.

Web links

1 www.kickstarter.com/projects/tnp/building-a-free-collection-of-our-worlds-visual-sy/description
2 thenounproject.com/handbook/royalties/#getting_paid
3 thenounproject.com/iconathon/

OPEN DATA INSTITUTE

The Open Data Institute is an independent nonprofit that connects, equips, and inspires people around the world to innovate with data. Founded in 2012 in the UK.

theodi.org

Revenue model: grant and government funding, charging for custom services, donations

Interview date: November 11, 2015
Interviewee: Jeni Tennison, technical director

Profile written by Paul Stacey

Cofounded by Sir Tim Berners-Lee and Sir Nigel Shadbolt in 2012, the London-based Open Data Institute (ODI) offers data-related training, events, consulting services, and research. For ODI, Creative Commons licenses are central to making their own business model and their customers' open. CC BY (Attribution), CC BY-SA (Attribution-ShareAlike), and CC0 (placed in the public domain) all play a critical role in ODI's mission to help people around the world innovate with data.

Data underpins planning and decision making across all aspects of society. Weather data helps farmers know when to plant their crops, flight time data from airplane companies helps us plan our travel, data on local housing informs city planning. When this data is not only accurate and timely, but open and accessible, it opens up new possibilities. Open data can be a resource businesses use to build new products and services. It can help governments measure progress, improve efficiency, and target investments. It can help citizens improve their lives by better understanding what is happening around them.

The Open Data Institute's 2012–17 business plan starts out by describing its vision to establish itself as a world-leading center and to research and be innovative with the opportunities created by the UK government's open data policy. (The government was an early pioneer in open policy and open-data initiatives.) It goes on to say that the ODI wants to—

- demonstrate the commercial value of open government data and how open-data policies affect this;
- develop the economic benefits case and business models for open data;
- help UK businesses use open data; and
- show how open data can improve public services.[1]

ODI is very explicit about how it wants to make *open* business models, and defining what this means. Jeni Tennison, ODI's technical director, puts it this way: "There is a whole ecosystem of *open*—open-source software, open government, open-access research—and a whole ecosystem of *data*. ODI's work cuts across both, with an emphasis on where they overlap—with *open data*." ODI's particular focus is to show open data's potential for revenue.

As an independent nonprofit, ODI secured £10 million over five years from the UK government via Innovate UK, an agency that promotes innovation in science and technology. For this funding, ODI has to secure matching funds from other sources, some of which were met through a $4.75-million investment from the Omidyar Network.

Jeni started out as a developer and technical architect for data.gov.uk, the UK government's pioneering open-data initiative. She helped make data sets from government departments available as open data. She joined ODI in 2012 when it was just starting up, as one of six people. It now has a staff of about sixty.

ODI strives to have half its annual budget come from the core UK government and Omidyar grants, and the other half from project-based research and commercial work. In Jeni's view, having this balance of revenue sources establishes some stability, but also keeps them motivated to go out and generate these matching funds in response to market needs.

On the commercial side, ODI generates funding through memberships, training, and advisory services.

You can join the ODI as an individual or commercial member. Individual membership is pay-what-you-can, with options ranging from £1 to £100. Members receive a newsletter and related communications and a discount on ODI training courses and the annual summit, and they can display an ODI-supporter badge on their website. Commercial membership is divided into two tiers: small to medium size enterprises and nonprofits at £720 a year, and corporations and government organizations at £2,200 a year. Commercial members have greater opportunities to connect and collaborate, explore the benefits of open data, and unlock new business opportunities. (All members are listed on their website.)[2]

ODI provides standardized open data training courses in which anyone can enroll. The initial idea was to offer an intensive and academically oriented diploma in open data, but it quickly became clear there was no market for that. Instead, they offered a five-day-long public training course, which has subsequently been reduced to three days; now the most popular course is one day long. The fee, in addition to the time commitment, can be a barrier for participation. Jeni says, "Most of the people who would be able to pay don't know they need it. Most who know they need it can't pay." Public-sector organizations sometimes give vouchers to their employees so they can attend as a form of professional development.

ODI customizes training for clients as well, for which there is more demand. Custom training usually emerges through an established relationship with an organization. The training program is based on a definition of open-data knowledge as applicable to the organization and on the skills needed by their high-level executives, management, and technical staff.

The training tends to generate high interest and commitment.

Education about open data is also a part of ODI's annual summit event, where curated presentations and speakers showcase the work of ODI and its members across the entire ecosystem. Tickets to the summit are available to the public, and hundreds of people and organizations attend and participate. In 2014, there were four thematic tracks and over 750 attendees.

In addition to memberships and training, ODI provides advisory services to help with technical-data support, technology development, change management, policies, and other areas. ODI has advised large commercial organizations, small businesses, and international governments; the focus at the moment is on government, but ODI is working to shift more toward commercial organizations.

On the commercial side, the following value propositions seem to resonate:

- Data-driven insights. Businesses need data from outside their business to get more insight. Businesses can generate value and more effectively pursue their own goals if they open up their own data too. Big data is a hot topic.

- Open innovation. Many large-scale enterprises are aware they don't innovate very well. One way they can innovate is to open up their data. ODI encourages them to do so even if it exposes problems and challenges. The key is to invite other people to help while still maintaining organizational autonomy.

- Corporate social responsibility. While this resonates with businesses, ODI cautions against having it be the sole reason for making data open. If a business is just thinking about open data as a way to be transparent and accountable, they can miss out on efficiencies and opportunities.

IT IS PERFECTLY POSSIBLE TO GENERATE SUSTAINABLE REVENUE STREAMS THAT DO NOT RELY ON RESTRICTIVE LICENSING OF CONTENT, DATA, OR CODE.

During their early years, ODI wanted to focus solely on the United Kingdom. But in their first year, large delegations of government visitors from over fifty countries wanted to learn more about the UK government's open-data practices and how ODI saw that translating into economic value. They were contracted as a service provider to international governments, which prompted a need to set up international ODI "nodes."

Nodes are franchises of the ODI at a regional or city level. Hosted by existing (for-profit or not-for-profit) organizations, they operate locally but are part of the global network. Each ODI node adopts the charter, a set of guiding principles and rules under which ODI operates. They develop and deliver training, connect people and businesses through membership and events, and communicate open-data stories from their part of the world. There are twenty-seven different nodes across nineteen countries. ODI nodes are charged a small fee to be part of the network and to use the brand.

ODI also runs programs to help start-ups in the UK and across Europe develop a sustainable business around open data, offering mentoring, advice, training, and even office space.[3]

A big part of ODI's business model revolves around community building. Memberships, training, summits, consulting services, nodes, and start-up programs create an ever-growing network of open-data users and leaders. (In fact, ODI even operates something called an Open Data Leaders Network.) For ODI, community is key to success. They devote significant time and effort to build it, not just online but through face-to-face events.

ODI has created an online tool that organizations can use to assess the legal, practical, technical, and social aspects of their open data. If it is of high quality, the organization can earn ODI's Open Data Certificate, a globally recognized mark that signals that their open data is useful, reliable, accessible, discoverable, and supported.[4]

Separate from commercial activities, the ODI generates funding through research grants. Research includes looking at evidence on the impact of open data, development of open-data tools and standards, and how to deploy open data at scale.

Creative Commons 4.0 licenses cover database rights and ODI recommends CC BY, CC BY-SA, and CC0 for data releases. ODI encourages publishers of data to use Creative Commons licenses rather than creating new "open licenses" of their own.

For ODI, *open* is at the heart of what they do. They also release any software code they produce under open-source-software licenses, and publications and reports under CC BY or CC BY-SA licenses. ODI's mission is to connect and equip people around the world so they can innovate with data. Disseminating stories, research, guidance, and code under an open license is essential for achieving that mission. It also demonstrates that it is perfectly possible to generate sustainable revenue streams that do not rely on restrictive licensing of content, data, or code. People pay to have ODI experts provide training to them, not for the content of the training; people pay for the advice ODI gives them, not for the methodologies they use. Producing open content, data, and source code helps establish credibility and creates leads for the paid services that they offer. According to Jeni, "The biggest lesson we have learned is that it is completely possible to be open, get customers, and make money."

To serve as evidence of a successful open business model and return on investment, ODI has a public dashboard of key performance indicators. Here are a few metrics as of April 27, 2016:

- Total amount of cash investments unlocked in direct investments in ODI, competition funding, direct contracts, and partnerships, and income that ODI nodes and ODI start-ups have generated since joining the ODI program: £44.5 million

- Total number of active members and nodes across the globe: 1,350

- Total sales since ODI began: £7.44 million

- Total number of unique people reached since ODI began, in person and online: 2.2 million

- Total Open Data Certificates created: 151,000

- Total number of people trained by ODI and its nodes since ODI began: 5,0805

Web links

1 e642e8368e3bf8d5526e-464b4b70b4554c1a79566214d402739e.r6.cf3.rackcdn.com/odi-business-plan-may-release.pdf
2 directory.theodi.org/members
3 theodi.org/odi-startup-programme; theodi.org/open-data-incubator-for-europe
4 certificates.theodi.org
5 dashboards.theodi.org/company/all

OPENDESK

Opendesk is a for-profit company offering an online platform that connects furniture designers around the world with customers and local makers who bring the designs to life. Founded in 2014 in the UK.

www.opendesk.cc

Revenue model: charging a transaction fee

Interview date: November 4, 2015
Interviewees: Nick Ierodiaconou and Joni Steiner, cofounders

Profile written by Paul Stacey

Opendesk is an online platform that connects furniture designers around the world not just with customers but also with local registered makers who bring the designs to life. Opendesk and the designer receive a portion of every sale that is made by a maker.

Cofounders Nick Ierodiaconou and Joni Steiner studied and worked as architects together. They also made goods. Their first client was Mint Digital, who had an interest in open licensing. Nick and Joni were exploring digital fabrication, and Mint's interest in open licensing got them to thinking how the open-source world may interact and apply to physical goods. They sought to design something for their client that was also reproducible. As they put it, they decided to "ship the recipe, but not the goods." They created the design using software, put it under an open license, and had it manufactured locally near the client. This was the start of the idea for Opendesk. The idea for Wikihouse—another open project dedicated to accessible housing for all—started as discussions around the same table. The two projects ultimately went on separate paths, with Wikihouse becoming a nonprofit foundation and Opendesk a for-profit company.

When Nick and Joni set out to create Opendesk, there were a lot of questions about the viability of distributed manufacturing. No one was doing it in a way that was even close to realistic or competitive. The design community had the intent, but fulfilling this vision was still a long way away.

And now this sector is emerging, and Nick and Joni are highly interested in the commercialization aspects of it. As part of coming up

with a business model, they began investigating intellectual property and licensing options. It was a thorny space, especially for designs. Just what aspect of a design is copyrightable? What is patentable? How can allowing for digital sharing and distribution be balanced against the designer's desire to still hold ownership? In the end, they decided there was no need to reinvent the wheel and settled on using Creative Commons.

When designing the Opendesk system, they had two goals. They wanted anyone, anywhere in the world, to be able to download designs so that they could be made locally, and they wanted a viable model that benefited designers when their designs were sold. Coming up with a business model was going to be complex.

They gave a lot of thought to three angles—the potential for social sharing, allowing designers to choose their license, and the impact these choices would have on the business model.

In support of social sharing, Opendesk actively advocates for (but doesn't demand) open licensing. And Nick and Joni are agnostic about which Creative Commons license is used; it's up to the designer. They can be proprietary or choose from the full suite of Creative Commons licenses, deciding for themselves how open or closed they want to be.

For the most part, designers love the idea of sharing content. They understand that you get positive feedback when you're attributed, what Nick and Joni called "reputational glow." And Opendesk does an awesome job profiling the designers.[1]

While designers are largely OK with personal sharing, there is a concern that someone will take the design and manufacture the furniture in bulk, with the designer not getting any benefits. So most Opendesk designers choose the Attribution-NonCommercial license (CC BY-NC).

Anyone can download a design and make it themselves, provided it's for noncommercial use — and there have been many, many downloads. Or users can buy the product from Opendesk, or from a registered maker in Opendesk's network, for on-demand personal fabrication. The network of Opendesk makers currently is made up of those who do digital fabrication using a computer-controlled CNC (Computer Numeric Control) machining device that cuts shapes out of wooden sheets according to the specifications in the design file.

Makers benefit from being part of Opendesk's network. Making furniture for local customers is paid work, and Opendesk generates business for them. Joni said, "Finding a whole network and community of makers was pretty easy because we built a site where people could write in about their capabilities. Building the community by learning from the maker community is how we have moved forward." Opendesk now has relationships with hundreds of makers in countries all around the world.[2]

The makers are a critical part of the Opendesk business model. Their model builds off the makers' quotes. Here's how it's expressed on Opendesk's website:

When customers buy an Opendesk product directly from a registered maker, they pay:

- the manufacturing cost as set by the maker (this covers material and labour costs for the product to be manufactured and any extra assembly costs charged by the maker)
- a design fee for the designer (a design fee that is paid to the designer every time their design is used)
- a percentage fee to the Opendesk platform (this supports the infrastructure and ongoing development of the platform that helps us build out our marketplace)

- a percentage fee to the channel through which the sale is made (at the moment this is Opendesk, but in the future we aim to open this up to third-party sellers who can sell Opendesk products through their own channels—this covers sales and marketing fees for the relevant channel)

- a local delivery service charge (the delivery is typically charged by the maker, but in some cases may be paid to a third-party delivery partner)

- charges for any additional services the customer chooses, such as on-site assembly (additional services are discretionary—in many cases makers will be happy to quote for assembly on-site and designers may offer bespoke design options)

- local sales taxes (variable by customer and maker location)[3]

They then go into detail how makers' quotes are created:

When a customer wants to buy an Opendesk . . . they are provided with a transparent breakdown of fees including the manufacturing cost, design fee, Opendesk platform fee and channel fees. If a customer opts to buy by getting in touch directly with a registered local maker using a downloaded Opendesk file, the maker is responsible for ensuring the design fee, Opendesk platform fee and channel fees are included in any quote at the time of sale. Percentage fees are always based on the underlying manufacturing cost and are typically apportioned as follows:

- manufacturing cost: fabrication, finishing and any other costs as set by the maker (excluding any services like delivery or on-site assembly)

- design fee: 8 percent of the manufacturing cost

- platform fee: 12 percent of the manufacturing cost

- channel fee: 18 percent of the manufacturing cost

- sales tax: as applicable (depends on product and location)

Opendesk shares revenue with their community of designers. According to Nick and Joni, a typical designer fee is around 2.5 percent, so Opendesk's 8 percent is more generous, and providing a higher value to the designer.

The Opendesk website features stories of designers and makers. Denis Fuzii published the design for the Valovi Chair from his studio in São Paulo. His designs have been downloaded over five thousand times in ninety-five countries. I.J. CNC Services is Ian Jinks, a professional maker based in the United Kingdom. Opendesk now makes up a large proportion of his business.

To manage resources and remain effective, Opendesk has so far focused on a very narrow niche—primarily office furniture of a certain simple aesthetic, which uses only one type of material and one manufacturing technique. This allows them to be more strategic and more disruptive in the market, by getting things to market quickly with competitive prices. It also reflects their vision of creating reproducible and functional pieces.

On their website, Opendesk describes what they do as "open making": "Designers get a global distribution channel. Makers get profitable jobs and new customers. You get designer products without the designer price tag, a more social, eco-friendly alternative to mass-production and an affordable way to buy custom-made products."

Nick and Joni say that customers like the fact that the furniture has a known provenance. People really like that their furniture was designed by a certain international designer but was made by a maker in their local community; it's a great story to tell. It certainly sets apart Opendesk furniture from the usual mass-produced items from a store.

YOU GET DESIGNER PRODUCTS WITHOUT THE DESIGNER PRICE TAG, A MORE SOCIAL, ECO-FRIENDLY ALTERNATIVE TO MASSPRODUCTION, AND AN AFFORDABLE WAY TO BUY CUSTOM-MADE PRODUCTS.

Nick and Joni are taking a community-based approach to define and evolve Opendesk and the "open making" business model. They're engaging thought leaders and practitioners to define this new movement. They have a separate Open Making site, which includes a manifesto, a field guide, and an invitation to get involved in the Open Making community.[4] People can submit ideas and discuss the principles and business practices they'd like to see used.

Nick and Joni talked a lot with us about intellectual property (IP) and commercialization. Many of their designers fear the idea that someone could take one of their design files and make and sell infinite number of pieces of furniture with it. As a consequence, most Opendesk designers choose the Attribution-NonCommercial license (CC BY-NC).

Opendesk established a set of principles for what their community considers commercial and noncommercial use. Their website states:

It is unambiguously commercial use when anyone:

- charges a fee or makes a profit when making an Opendesk
- sells (or bases a commercial service on) an Opendesk

It follows from this that noncommercial use is when you make an Opendesk yourself, with no intention to gain commercial advantage or monetary compensation. For example, these qualify as noncommercial:

- you are an individual with your own CNC machine, or access to a shared CNC machine, and will personally cut and make a few pieces of furniture yourself
- you are a student (or teacher) and you use the design files for educational purposes or training (and do not intend to sell the resulting pieces)
- you work for a charity and get furniture cut by volunteers, or by employees at a fab lab or maker space

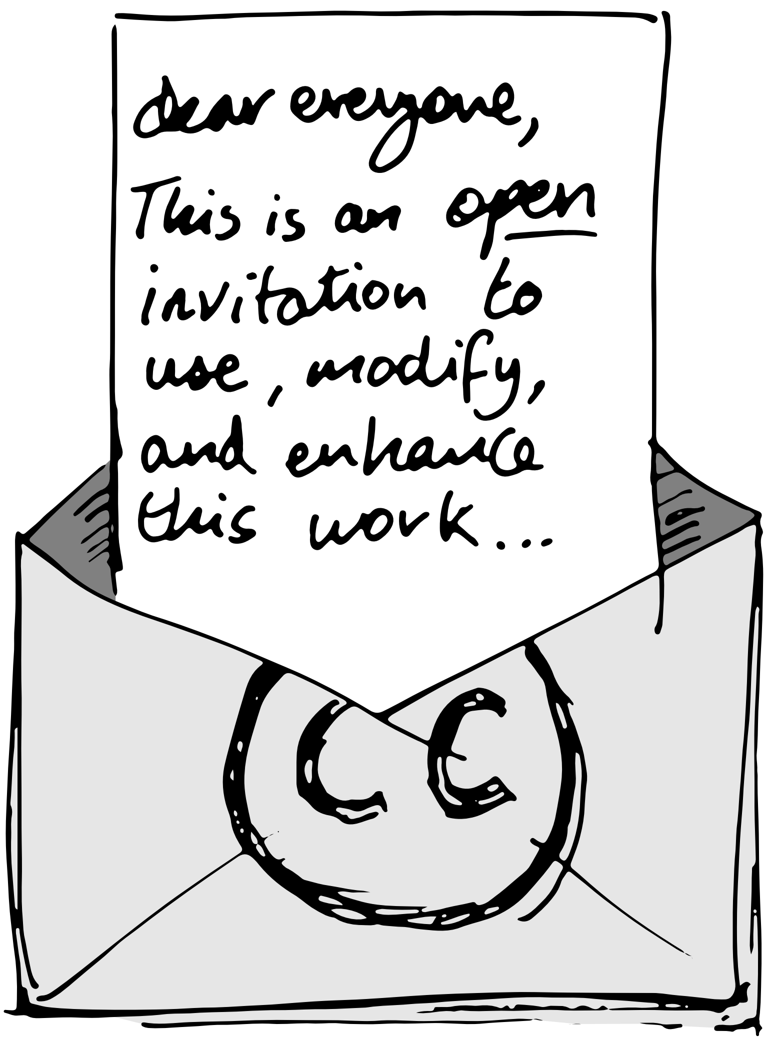
Whether or not people technically are doing things that implicate IP, Nick and Joni have found that people tend to comply with the wishes of creators out of a sense of fairness. They have found that behavioral economics can replace some of the thorny legal issues. In their business model, Nick and Joni are trying to suspend the focus on IP and build an open business model that works for all stakeholders—designers, channels, manufacturers, and customers. For them, the value Opendesk generates hangs off "open," not IP.

The mission of Opendesk is about relocalizing manufacturing, which changes the way we think about how goods are made. Commercialization is integral to their mission, and they've begun to focus on success metrics that track how many makers and designers are engaged through Opendesk in revenue-making work.

As a global platform for local making, Opendesk's business model has been built on honesty, transparency, and inclusivity. As Nick and Joni describe it, they put ideas out there that get traction and then have faith in people.

Web links

1 www.opendesk.cc/designers
2 www.opendesk.cc/open-making/makers/
3 www.opendesk.cc/open-making/join
4 openmaking.is



an unusual invitation

OPENSTAX

OpenStax is a nonprofit that provides free, openly licensed textbooks for high-enrollment introductory college courses and Advanced Placement courses. Founded in 2012 in the U.S.

www.openstaxcollege.org

Revenue model: grant funding, charging for custom services, charging for physical copies (textbook sales)

Interview date: December 16, 2015
Interviewee: David Harris, editor-in-chief

Profile written by Paul Stacey

OpenStax is an extension of a program called Connexions, which was started in 1999 by Dr. Richard Baraniuk, the Victor E. Cameron Professor of Electrical and Computer Engineering at Rice University in Houston, Texas. Frustrated by the limitations of traditional textbooks and courses, Dr. Baraniuk wanted to provide authors and learners a way to share and freely adapt educational materials such as courses, books, and reports. Today, Connexions (now called OpenStax CNX) is one of the world's best libraries of customizable educational materials, all licensed with Creative Commons and available to anyone, anywhere, anytime—for free.

In 2008, while in a senior leadership role at WebAssign and looking at ways to reduce the risk that came with relying on publishers, David Harris began investigating open educational resources (OER) and discovered Connexions. A year and a half later, Connexions received a grant to help grow the use of OER so that it could meet the needs of students who couldn't afford textbooks. David came on board to spearhead this effort. Connexions became OpenStax CNX; the program to create open textbooks became OpenStax College, now simply called OpenStax.

David brought with him a deep understanding of the best practices of publishing along with where publishers have inefficiencies. In David's view, peer review and high standards for quality are critically important if you want to scale easily. Books have to have logical scope and sequence, they have to exist as a whole and not in pieces, and they have to be easy to find. The working hypothesis for the launch of OpenStax was to professionally produce a turnkey textbook by investing effort up front, with the expectation that this would lead to

rapid growth through easy downstream adoptions by faculty and students.

In 2012, OpenStax College launched as a nonprofit with the aim of producing high-quality, peer-reviewed full-color textbooks that would be available for free for the twenty-five most heavily attended college courses in the nation. Today they are fast approaching that number. There is data that proves the success of their original hypothesis on how many students they could help and how much money they could help save.[1] Professionally produced content scales rapidly. All with no sales force!

OpenStax textbooks are all Attribution (CC BY) licensed, and each textbook is available as a PDF, an e-book, or web pages. Those who want a physical copy can buy one for an affordable price. Given the cost of education and student debt in North America, free or very low-cost textbooks are very appealing. OpenStax encourages students to talk to their professor and librarians about these textbooks and to advocate for their use.

Teachers are invited to try out a single chapter from one of the textbooks with students. If that goes well, they're encouraged to adopt the entire book. They can simply paste a URL into their course syllabus, for free and unlimited access. And with the CC BY license, teachers are free to delete chapters, make changes, and customize any book to fit their needs.

Any teacher can post corrections, suggest examples for difficult concepts, or volunteer as an editor or author. As many teachers also want supplemental material to accompany a textbook, OpenStax also provides slide presentations, test banks, answer keys, and so on.

Institutions can stand out by offering students a lower-cost education through the use of OpenStax textbooks; there's even a textbook-savings calculator they can use to see how much students would save. OpenStax keeps a running list of institutions that have adopted their textbooks.[2]

Unlike traditional publishers' monolithic approach of controlling intellectual property, distribution, and so many other aspects, OpenStax has adopted a model that embraces open licensing and relies on an extensive network of partners.

Up-front funding of a professionally produced all-color turnkey textbook is expensive. For this part of their model, OpenStax relies on philanthropy. They have initially been funded by the William and Flora Hewlett Foundation, the Laura and John Arnold Foundation, the Bill and Melinda Gates Foundation, the 20 Million Minds Foundation, the Maxfield Foundation, the Calvin K. Kazanjian Foundation, and Rice University. To develop additional titles and supporting technology is probably still going to require philanthropic investment.

However, ongoing operations will not rely on foundation grants but instead on funds received through an ecosystem of over forty partners, whereby a partner takes core content from OpenStax and adds features that it can create revenue from. For example, WebAssign, an online homework and assessment tool, takes the physics book and adds algorithmically generated physics problems, with problem-specific feedback, detailed solutions, and tutorial support. WebAssign resources are available to students for a fee.

Another example is Odigia, who has turned OpenStax books into interactive learning experiences and created additional tools to measure and promote student engagement. Odigia licenses its learning platform to institutions. Partners like Odigia and WebAssign give a percentage of the revenue they earn back to OpenStax, as mission-support fees. OpenStax has already published revisions of their titles, such as *Introduction to Sociology 2e*, using these funds.

In David's view, this approach lets the market operate at peak efficiency. OpenStax's partners don't have to worry about developing textbook content, freeing them up from those

development costs and letting them focus on what they do best. With OpenStax textbooks available at no cost, they can provide their services at a lower cost—not free, but still saving students money. OpenStax benefits not only by receiving mission-support fees but through free publicity and marketing. OpenStax doesn't have a sales force; partners are out there showcasing their materials.

OpenStax's cost of sales to acquire a single student is very, very low and is a fraction of what traditional players in the market face. This year, Tyton Partners is actually evaluating the costs of sales for an OER effort like OpenStax in comparison with incumbents. David looks forward to sharing these findings with the community.

MAKE IT POSSIBLE FOR EVERY STUDENT WHO WANTS ACCESS TO EDUCATION TO GET IT.

While OpenStax books are available online for free, many students still want a print copy. Through a partnership with a print and courier company, OpenStax offers a complete solution that scales. OpenStax sells tens of thousands of print books. The price of an OpenStax sociology textbook is about twenty-eight dollars, a fraction of what sociology textbooks usually cost. OpenStax keeps the prices low but does aim to earn a small margin on each book sold, which also contributes to ongoing operations.

Campus-based bookstores are part of the OpenStax solution. OpenStax collaborates with NACSCORP (the National Association of College Stores Corporation) to provide print versions of their textbooks in the stores. While the overall cost of the textbook is significantly less than a traditional textbook, bookstores can still make a profit on sales. Sometimes students take the savings they have from the lower-priced book and use it to buy other things in the bookstore. And OpenStax is trying to break the expensive behavior of excessive returns by having a no-returns policy. This is working well, since the sell-through of their print titles is virtually a hundred percent.

David thinks of the OpenStax model as "OER 2.0." So what is OER 1.0? Historically in the OER field, many OER initiatives have been locally funded by institutions or government ministries. In David's view, this results in content that has high local value but is infrequently adopted nationally. It's therefore difficult to show payback over a time scale that is reasonable.

OER 2.0 is about OER intended to be used and adopted on a national level right from the start. This requires a bigger investment up front but pays off through wide geographic adoption. The OER 2.0 process for OpenStax involves two development models. The first is what David calls the acquisition model, where OpenStax purchases the rights from a publisher or author for an already published book and then extensively revises it. The OpenStax physics textbook, for example, was licensed from an author after the publisher released the rights back to the authors. The second model is to develop a book from scratch, a good example being their biology book.

The process is similar for both models. First they look at the scope and sequence of existing textbooks. They ask questions like what does the customer need? Where are students having challenges? Then they identify potential authors and put them through a rigorous evaluation—only one in ten authors make it through. OpenStax selects a team of authors who come together to develop a template for a chapter and collectively write the first draft (or revise it, in the acquisitions model). (OpenStax doesn't do books with just a single author as David says it risks the project going longer than scheduled.) The draft is peer-reviewed with no less than three reviewers per chapter. A second draft is generated, with artists producing illustrations and visuals to go along with the text. The book is then copyedited to

ensure grammatical correctness and a singular voice. Finally, it goes into production and through a final proofread. The whole process is very time-consuming.

All the people involved in this process are paid. OpenStax does not rely on volunteers. Writers, reviewers, illustrators, and editors are all paid an up-front fee—OpenStax does not use a royalty model. A best-selling author might make more money under the traditional publishing model, but that is only maybe 5 percent of all authors. From David's perspective, 95 percent of all authors do better under the OER 2.0 model, as there is no risk to them and they earn all the money up front.

David thinks of the Attribution license (CC BY) as the "innovation license." It's core to the mission of OpenStax, letting people use their textbooks in innovative ways without having to ask for permission. It frees up the whole market and has been central to OpenStax being able to bring on partners. OpenStax sees a lot of customization of their materials. By enabling frictionless remixing, CC BY gives teachers control and academic freedom.

Using CC BY is also a good example of using strategies that traditional publishers can't. Traditional publishers rely on copyright to prevent others from making copies and heavily invest in digital rights management to ensure their books aren't shared. By using CC BY, OpenStax avoids having to deal with digital rights management and its costs. OpenStax books can be copied and shared over and over again. CC BY changes the rules of engagement and takes advantage of traditional market inefficiencies.

As of September 16, 2016, OpenStax has achieved some impressive results. From the *OpenStax at a Glance* fact sheet from their recent press kit:

- Books published: 23

- Students who have used OpenStax: 1.6 million

- Money saved for students: $155 million

- Money saved for students in the 2016/17 academic year: $77 million

- Schools that have used OpenStax: 2,668 (This number reflects all institutions using at least one OpenStax textbook. Out of 2,668 schools, 517 are two-year colleges, 835 four-year colleges and universities, and 344 colleges and universities outside the U.S.)

While OpenStax has to date been focused on the United States, there is overseas adoption especially in the science, technology, engineering, and math (STEM) fields. Large scale adoption in the United States is seen as a necessary precursor to international interest.

OpenStax has primarily focused on introductory-level college courses where there is high enrollment, but they are starting to think about *verticals*—a broad offering for a specific group or need. David thinks it would be terrific if OpenStax could provide access to free textbooks through the entire curriculum of a nursing degree, for example.

Finally, for OpenStax success is not just about the adoption of their textbooks and student savings. There is a human aspect to the work that is hard to quantify but incredibly important. They get emails from students saying how OpenStax saved them from making difficult choices like buying food or a textbook. OpenStax would also like to assess the impact their books have on learning efficiency, persistence, and completion. By building an open business model based on Creative Commons, OpenStax is making it possible for every student who wants access to education to get it.

Web links

1 news.rice.edu/files/2016/01/0119-OPENSTAX-2016Infographic-lg-1tahxiu.jpg
2 openstax.org/adopters

AMANDA PALMER

Amanda Palmer is a musician, artist, and writer. Based in the U.S.

amandapalmer.net

Revenue model: crowdfunding (subscription-based), pay-what-you-want, charging for physical copies (book and album sales), charging for in-person version (performances), selling merchandise

Interview date: December 15, 2015

Profile written by Sarah Hinchliff Pearson

Since the beginning of her career, Amanda Palmer has been on what she calls a "journey with no roadmap," continually experimenting to find new ways to sustain her creative work. [1] In her best-selling book, *The Art of Asking*, Amanda articulates exactly what she has been and continues to strive for—"the ideal sweet spot . . . in which the artist can share freely and directly feel the reverberations of their artistic gifts to the community, and make a living doing that."

While she seems to have successfully found that sweet spot for herself, Amanda is the first to acknowledge there is no silver bullet. She thinks the digital age is both an exciting and frustrating time for creators. "On the one hand, we have this beautiful shareability," Amanda said. "On the other, you've got a bunch of confused artists wondering how to make money to buy food so we can make more art."

Amanda began her artistic career as a street performer. She would dress up in an antique wedding gown, paint her face white, stand on a stack of milk crates, and hand out flowers to strangers as part of a silent dramatic performance. She collected money in a hat. Most people walked by her without stopping, but an essential few stopped to watch and drop some money into her hat to show their appreciation. Rather than dwelling on the majority of people who ignored her, she felt thankful for those who stopped. "All I needed was . . . *some* people," she wrote in her book. "Enough people.

Enough to make it worth coming back the next day, enough people to help me make rent and put food on the table. Enough so I could keep making art."

Amanda has come a long way from her street-performing days, but her career remains dominated by that same sentiment—finding ways to reach "her crowd" and feeling gratitude when she does. With her band the Dresden Dolls, Amanda tried the traditional path of signing with a record label. It didn't take for a variety of reasons, but one of them was that the label had absolutely no interest in Amanda's view of success. They wanted hits, but making music for the masses was never what Amanda and the Dresden Dolls set out to do.

After leaving the record label in 2008, she began experimenting with different ways to make a living. She released music directly to the public without involving a middle man, releasing digital files on a "pay what you want" basis and selling CDs and vinyl. She also made money from live performances and merchandise sales. Eventually, in 2012 she decided to try her hand at the sort of crowdfunding we know so well today. Her Kickstarter project started with a goal of $100,000, and she made $1.2 million. It remains one of the most successful Kickstarter projects of all time.

Today, Amanda has switched gears away from crowdfunding for specific projects to instead getting consistent financial support from her fan base on Patreon, a crowdfunding site that allows artists to get recurring donations from fans. More than eight thousand people have signed up to support her so she can create music, art, and any other creative "thing" that she is inspired to make. The recurring pledges are made on a "per thing" basis. All of the content she makes is made freely available under an Attribution-NonCommercial-ShareAlike license (CC BY-NC-SA).

Making her music and art available under Creative Commons licensing undoubtedly limits her options for how she makes a living. But sharing her work has been part of her model since the beginning of her career, even before she discovered Creative Commons. Amanda says the Dresden Dolls used to get ten emails per week from fans asking if they could use their music for different projects. They said yes to all of the requests, as long as it wasn't for a completely for-profit venture. At the time, they used a short-form agreement written by Amanda herself. "I made everyone sign that contract so at least I wouldn't be leaving the band vulnerable to someone later going on and putting our music in a Camel cigarette ad," Amanda said. Once she discovered Creative Commons, adopting the licenses was an easy decision because it gave them a more formal, standardized way of doing what they had been doing all along. The NonCommercial licenses were a natural fit.

Amanda embraces the way her fans share and build upon her music. In *The Art of Asking*, she wrote that some of her fans' unofficial videos using her music surpass the official videos in number of views on YouTube. Rather than seeing this sort of thing as competition, Amanda celebrates it. "We got into this because we wanted to share the joy of music," she said.

This is symbolic of how nearly everything she does in her career is motivated by a desire to connect with her fans. At the start of her career, she and the band would throw concerts at house parties. As the gatherings grew, the line between fans and friends was completely blurred. "Not only did most our early fans know where I lived and where we practiced, but most of them had also been in my kitchen," Amanda wrote in *The Art of Asking*.

Even though her fan base is now huge and global, she continues to seek this sort of human connection with her fans. She seeks out face-to-face contact with her fans every chance she can get. Her hugely successful Kickstarter featured fifty concerts at house parties for backers. She spends hours in the signing line after shows. It helps that Amanda has the kind of dynamic, engaging personality that instantly draws people to her, but a big component of

her ability to connect with people is her willingness to listen. “Listening fast and caring immediately is a skill unto itself,” Amanda wrote.

Another part of the connection fans feel with Amanda is how much they know about her life. Rather than trying to craft a public persona or image, she essentially lives her life as an open book. She has written openly about incredibly personal events in her life, and she isn’t afraid to be vulnerable. Having that kind of trust in her fans—the trust it takes to be truly honest—begets trust from her fans in return. When she meets fans for the first time after a show, they can legitimately feel like they know her.

“With social media, we’re so concerned with the picture looking palatable and consumable that we forget that being human and showing the flaws and exposing the vulnerability actually create a deeper connection than just looking fantastic,” Amanda said. “Everything in our culture is telling us otherwise. But my experience has shown me that the risk of making yourself vulnerable is almost always worth it.”

Not only does she disclose intimate details of her life to them, she sleeps on their couches, listens to their stories, cries with them. In short, she treats her fans like friends in nearly every possible way, even when they are complete strangers. This mentality—that fans are friends—is completely intertwined with Amanda’s success as an artist. It is also intertwined with her use of Creative Commons licenses. Because that is what you do with your friends—you share.

After years of investing time and energy into building trust with her fans, she has a strong enough relationship with them to ask for support—through pay-what-you-want donations, Kickstarter, Patreon, or even asking them to lend a hand at a concert. As Amanda explains it, crowdfunding (which is really what all of these different things are) is about asking for support from people who know and trust you.

IT SOUNDS SO CORNY, BUT MY EXPERIENCE IN FORTY YEARS ON THIS PLANET HAS POINTED ME TO AN OBVIOUS TRUTH—THAT CONNECTION WITH HUMAN BEINGS FEELS SO MUCH BETTER AND MORE FULFILLING THAN APPROACHING ART THROUGH A CAPITALIST LENS. THERE IS NO MORE SATISFYING END GOAL THAN HAVING SOMEONE TELL YOU THAT WHAT YOU DO IS GENUINELY OF VALUE TO THEM.

People who feel personally invested in your success.

“When you openly, radically trust people, they not only take care of you, they become your allies, your family,” she wrote. There really is a feeling of solidarity within her core fan base. From the beginning, Amanda and her band encouraged people to dress up for their shows. They consciously cultivated a feeling of belonging to their “weird little family.”

This sort of intimacy with fans is not possible or even desirable for every creator. “I don’t take for granted that I happen to be the type of person who loves cavorting with strangers,” Amanda said. “I recognize that it’s not necessarily everyone’s idea of a good time. Everyone does it differently. Replicating what I have done won’t work for others if it isn’t joyful to them. It’s about finding a way to channel energy in a way that is joyful to you.”

Yet while Amanda joyfully interacts with her fans and involves them in her work as much as possible, she does keep one job primarily to herself—writing the music. She loves the creativity with which her fans use and adapt her work, but she intentionally does not involve them at the first stage of creating her artistic work. And, of course, the songs and music are what initially draw people to Amanda Palmer. It is only once she has connected to people through her music that she can then begin to build ties with them on a more personal level, both in person and online. In her book, Amanda describes it as casting a net. It starts with the art and then the bond strengthens with human connection.

For Amanda, the entire point of being an artist is to establish and maintain this connection. "It sounds so corny," she said, "but my experience in forty years on this planet has pointed me to an obvious truth—that connection with human beings feels so much better and more fulfilling than approaching art through a capitalist lens. There is no more satisfying end goal than having someone tell you that what you do is genuinely of value to them."

As she explains it, when a fan gives her a ten-dollar bill, usually what they are saying is that the money symbolizes some deeper value the music provided them. For Amanda, art is not just a product; it's a relationship. Viewed from this lens, what Amanda does today is not that different from what she did as a young street performer. She shares her music and other artistic gifts. She shares herself. And then rather than forcing people to help her, she lets them.

Web link

1 http://www.forbes.com/sites/zackomalleygreenburg/2015/04/16/amanda-palmer-uncut-the-kickstarter-queen-on-spotify-patreon-and-taylor-swift/#44e20ce46d67

PLOS (PUBLIC LIBRARY OF SCIENCE)

PLOS (Public Library of Science) is a nonprofit that publishes a library of academic journals and other scientific literature. Founded in 2000 in the U.S.

plos.org

Revenue model: charging content creators an author processing charge to be featured in the journal

Interview date: March 7, 2016
Interviewee: Louise Page, publisher

Profile written by Paul Stacey

The Public Library of Science (PLOS) began in 2000 when three leading scientists—Harold E. Varmus, Patrick O. Brown, and Michael Eisen—started an online petition. They were calling for scientists to stop submitting papers to journals that didn't make the full text of their papers freely available immediately or within six months. Although tens of thousands signed the petition, most did not follow through. In August 2001, Patrick and Michael announced that they would start their own nonprofit publishing operation to do just what the petition promised. With start-up grant support from the Gordon and Betty Moore Foundation, PLOS was launched to provide new open-access journals for biomedicine, with research articles being released under Attribution (CC BY) licenses.

Traditionally, academic publishing begins with an author submitting a manuscript to a publisher. After in-house technical and ethical considerations, the article is then peer-reviewed to determine if the quality of the work is acceptable for publishing. Once accepted,

the publisher takes the article through the process of copyediting, typesetting, and eventual publishing in a print or online publication. Traditional journal publishers recover costs and earn profit by charging a subscription fee to libraries or an access fee to users wanting to read the journal or article.

For Louise Page, the current publisher of PLOS, this traditional model results in inequity. Access is restricted to those who can pay. Most research is funded through government-appointed agencies, that is, with public funds. It's unjust that the public who funded the research would be required to pay again to access the results. Not everyone can afford the ever-escalating subscription fees publishers charge, especially when library budgets are being reduced. Restricting access to the results of scientific research slows the dissemination of this research and advancement of the field. It was time for a new model.

That new model became known as open access. That is, free and open availability on the Internet. Open-access research articles are not behind a paywall and do not require a login. A key benefit of open access is that it allows people to freely use, copy, and distribute the articles, as they are primarily published under an Attribution (CC BY) license (which only requires the user to provide appropriate attribution). And more importantly, policy makers, clinicians, entrepreneurs, educators, and students around the world have free and timely access to the latest research immediately on publication.

However, open access requires rethinking the business model of research publication. Rather than charge a subscription fee to access the journal, PLOS decided to turn the model on its head and charge a *publication* fee, known as an article-processing charge. This up-front fee, generally paid by the funder of the research or the author's institution, covers the expenses such as editorial oversight, peer-review management, journal production, online hosting, and support for discovery. Fees are per article and are billed upon acceptance for publishing. There are no additional charges based on word length, figures, or other elements.

Calculating the article-processing charge involves taking all the costs associated with publishing the journal and determining a cost per article that collectively recovers costs. For PLOS's journals in biology, medicine, genetics, computational biology, neglected tropical diseases, and pathogens, the article-processing charge ranges from $2,250 to $2,900. Article-publication charges for *PLOS ONE*, a journal started in 2006, are just under $1,500.

PLOS believes that lack of funds should not be a barrier to publication. Since its inception, PLOS has provided fee support for individuals and institutions to help authors who can't afford the article-processing charges.

Louise identifies marketing as one area of big difference between PLOS and traditional journal publishers. Traditional journals have to invest heavily in staff, buildings, and infrastructure to market their journal and convince customers to subscribe. Restricting access to subscribers means that tools for managing access control are necessary. They spend millions of dollars on access-control systems, staff to manage them, and sales staff. With PLOS's open-access publishing, there's no need for these massive expenses; the articles are free, open, and accessible to all upon publication. Additionally, traditional publishers tend to spend more on marketing to libraries, who ultimately pay the subscription fees. PLOS provides a better service for authors by promoting their research directly to the research community and giving the authors exposure. And this encourages other authors to submit their work for publication.

For Louise, PLOS would not exist without the Attribution license (CC BY). This makes it very clear what rights are associated with the content and provides a safe way for researchers to make their work available while ensuring

they get recognition (appropriate attribution). For PLOS, all of this aligns with how they think research content should be published and disseminated.

PLOS also has a broad open-data policy. To get their research paper published, PLOS authors must also make their *data* available in a public repository and provide a data-availability statement.

Business-operation costs associated with the open-access model still largely follow the existing publishing model. PLOS journals are online only, but the editorial, peer-review, production, typesetting, and publishing stages are all the same as for a traditional publisher. The editorial teams must be top notch. PLOS has to function as well as or better than other premier journals, as researchers have a choice about where to publish.

Researchers are influenced by journal rankings, which reflect the place of a journal within its field, the relative difficulty of being published in that journal, and the prestige associated with it. PLOS journals rank high, even though they are relatively new.

The promotion and tenure of researchers are partially based how many times other researchers cite their articles. Louise says when researchers want to discover and read the work of others in their field, they go to an online aggregator or search engine, and not typically to a particular journal. The CC BY licensing of PLOS research articles ensures easy access for readers and generates more discovery and citations for authors.

Louise believes that open access has been a huge success, progressing from a movement led by a small cadre of researchers to something that is now widespread and used in some form by every journal publisher. PLOS has had a big impact. In 2012 to 2014, they published more open-access articles than BioMed Central, the original open-access publisher, or anyone else.

PLOS further disrupted the traditional journal-publishing model by pioneering the concept of a megajournal. The *PLOS ONE* megajournal, launched in 2006, is an open-access peer-reviewed academic journal that is much larger than a traditional journal, publishing thousands of articles per year and benefiting from economies of scale. *PLOS ONE* has a broad scope, covering science and medicine as well as social sciences and the humanities. The review and editorial process is less subjective. Articles are accepted for publication based on whether they are technically sound rather than perceived importance or relevance. This is very important in the current debate about the integrity and reproducibility of research because negative or null results can then be published as well, which are generally rejected by traditional journals. *PLOS ONE*, like all the PLOS journals, is online only with no print version. PLOS passes on the financial savings accrued through economies of scale to researchers and the public by lowering the article-processing charges, which are below that of other journals. *PLOS ONE* is the biggest journal in the world and has really set the bar for publishing academic journal articles on a large scale. Other publishers see the value of the *PLOS ONE* model and are now offering their own multidisciplinary forums for publishing all sound science.

Louise outlined some other aspects of the research-journal business model PLOS is experimenting with, describing each as a kind of slider that could be adjusted to change current practice.

One slider is time to publication. Time to publication may shorten as journals get better at providing quicker decisions to authors. However, there is always a trade-off with scale, as the bigger the volume of articles, the more time the approval process inevitably takes.

Peer review is another part of the process that could change. It's possible to redefine what peer review actually is, when to review, and what constitutes the final article for publication. Louise talked about the potential to shift to an open-review process, placing the emphasis on transparency rather than dou-

ble-blind reviews. Louise thinks we're moving into a direction where it's actually beneficial for an author to know who is reviewing their paper and for the reviewer to know their review will be public. An open-review process can also ensure everyone gets credit; right now, credit is limited to the publisher and author.

Louise says research with negative outcomes is almost as important as positive results. If journals published more research with negative outcomes, we'd learn from what didn't work. It could also reduce how much the research wheel gets reinvented around the world.

Another adjustable practice is the sharing of articles at early preprint stages. Publication of research in a peer-reviewed journal can take a long time because articles must undergo extensive peer review. The need to quickly circulate current results within a scientific community has led to a practice of distributing pre-print documents that have not yet undergone peer review. Preprints broaden the peer-review process, allowing authors to receive early feedback from a wide group of peers, which can help revise and prepare the article for submission. Offsetting the advantages of preprints are author concerns over ensuring their primacy of being first to come up with findings based on their research. Other researches may see findings the preprint author has not yet thought of. However, preprints help researchers get their discoveries out early and establish precedence. A big challenge is that researchers don't have a lot of time to comment on preprints.

What constitutes a journal article could also change. The idea of a research article as printed, bound, and in a library stack is outdated. Digital and online open up new possibilities, such as a living document evolving over time, inclusion of audio and video, and interactivity, like discussion and recommendations. Even the size of what gets published could change. With these changes the current form factor for what constitutes a research article would undergo transformation.

As journals scale up, and new journals are introduced, more and more information is being pushed out to readers, making the experience feel like drinking from a fire hose. To help mitigate this, PLOS aggregates and curates content from PLOS journals and their network of blogs.[1] It also offers something called Article-Level Metrics, which helps users assess research most relevant to the field itself, based on indicators like usage, citations, social bookmarking and dissemination activity, media and blog coverage, discussions, and ratings.[2] Louise believes that the journal model could evolve to provide a more friendly and interactive user experience, including a way for readers to communicate with authors.

The big picture for PLOS going forward is to combine and adjust these experimental practices in ways that continue to improve accessibility and dissemination of research, while ensuring its integrity and reliability. The ways they interlink are complex. The process of change and adjustment is not linear. PLOS sees itself as a very flexible publisher interested in exploring all the permutations research-publishing can take, with authors and readers who are open to experimentation.

For PLOS, success is not about revenue. Success is about proving that scientific research can be communicated rapidly and economically at scale, for the benefit of researchers and society. The CC BY license makes it possible for PLOS to publish in a way that is unfettered, open, and fast, while ensuring that the authors get credit for their work. More than two million scientists, scholars, and clinicians visit PLOS every month, with more than 135,000 quality articles to peruse for free.

Ultimately, for PLOS, its authors, and its readers, success is about making research discoverable, available, and reproducible for the advancement of science.

Web links

1 collections.plos.org
2 plos.org/article-level-metrics

RIJKSMUSEUM

PUBLIC DOMAIN

The Rijksmuseum is a Dutch national museum dedicated to art and history. Founded in 1800 in the Netherlands

www.rijksmuseum.nl

Revenue model: grants and government funding, charging for in-person version (museum admission), selling merchandise

Interview date: December 11, 2015
Interviewee: Lizzy Jongma, the data manager of the collections information department

Profile written by Paul Stacey

The Rijksmuseum, a national museum in the Netherlands dedicated to art and history, has been housed in its current building since 1885. The monumental building enjoyed more than 125 years of intensive use before needing a thorough overhaul. In 2003, the museum was closed for renovations. Asbestos was found in the roof, and although the museum was scheduled to be closed for only three to four years, renovations ended up taking ten years. During this time, the collection was moved to a different part of Amsterdam, which created a physical distance with the curators. Out of necessity, they started digitally photographing the collection and creating metadata (information about each object to put into a database). With the renovations going on for so long, the museum became largely forgotten by the public. Out of these circumstances emerged a new and more open model for the museum.

By the time Lizzy Jongma joined the Rijksmuseum in 2011 as a data manager, staff were fed up with the situation the museum was in. They also realized that even with the new and larger space, it still wouldn't be able to show very much of the whole collection—eight thousand of over one million works representing just 1 percent. Staff began exploring ways to express themselves, to have something to show for all of the work they had been doing. The Rijksmuseum is primarily funded by Dutch taxpayers, so was there a way for the museum provide benefit to the public while it was closed? They began thinking about sharing Rijksmuseum's collection using information technology. And they put up a card-catalog like database of the entire collection online.

It was effective but a bit boring. It was just data. A hackathon they were invited to got them to start talking about events like that as having potential. They liked the idea of inviting people to do cool stuff with their collection.

What about giving online access to digital representations of the one hundred most important pieces in the Rijksmuseum collection? That eventually led to why not put *the whole collection* online?

Then, Lizzy says, Europeana came along. Europeana is Europe's digital library, museum, and archive for cultural heritage.[1] As an online portal to museum collections all across Europe, Europeana had become an important online platform. In October 2010 Creative Commons released CC0 and its public-domain mark as tools people could use to identify works as free of known copyright. Europeana was the first major adopter, using CC0 to release metadata about their collection and the public domain mark for millions of digital works in their collection. Lizzy says the Rijksmuseum initially found this change in business practice a bit scary, but at the same time it stimulated even more discussion on whether the Rijksmuseum should follow suit.

They realized that they don't "own" the collection and couldn't realistically monitor and enforce compliance with the restrictive licensing terms they currently had in place. For example, many copies and versions of Vermeer's *Milkmaid* (part of their collection) were already online, many of them of very poor quality. They could spend time and money policing its use, but it would probably be futile and wouldn't make people stop using their images online. They ended up thinking it's an utter waste of time to hunt down people who use the Rijksmuseum collection. And anyway, restricting access meant the people they were frustrating the most were schoolkids.

In 2011 the Rijksmuseum began making their digital photos of works known to be free of copyright available online, using Creative Commons CC0 to place works in the public domain. A medium-resolution image was offered for free, but a high-resolution version cost forty euros. People started paying, but Lizzy says getting the money was frequently a nightmare, especially from overseas customers. The administrative costs often offset revenue, and income above costs was relatively low. In addition, having to pay for an image of a work in the public domain from a collection owned by the Dutch government (i.e., paid for by the public) was contentious and frustrating for some. Lizzy says they had lots of fierce debates about what to do.

In 2013 the Rijksmuseum changed its business model. They Creative Commons licensed their highest-quality images and released them online for free. Digitization still cost money, however; they decided to define discrete digitization projects and find sponsors willing to fund each project. This turned out to be a successful strategy, generating high interest from sponsors and lower administrative effort for the Rijksmuseum. They started out making 150,000 high-quality images of their collection available, with the goal to eventually have the entire collection online.

Releasing these high-quality images for free reduced the number of poor-quality images that were proliferating. The high-quality image of Vermeer's *Milkmaid*, for example, is downloaded two to three thousand times a month. On the Internet, images from a source like the Rijksmuseum are more trusted, and releasing them with a Creative Commons CC0 means they can easily be found in other platforms. For example, Rijksmuseum images are now used in thousands of Wikipedia articles, receiving ten to eleven million views per month. This extends Rijksmuseum's reach far beyond the scope of its website. Sharing these images online creates what Lizzy calls the "Mona Lisa effect," where a work of art becomes so famous that people want to see it in real life by visiting the actual museum.

Every museum tends to be driven by the number of physical visitors. The Rijksmuseum is primarily publicly funded, receiving roughly 70 percent of its operating budget from the government. But like many museums, it must generate the rest of the funding through other means. The admission fee has long been a way

to generate revenue generation, including for the Rijksmuseum.

As museums create a digital presence for themselves and put up digital representations of their collection online, there's frequently a worry that it will lead to a drop in actual physical visits. For the Rijksmuseum, this has not turned out to be the case. Lizzy told us the Rijksmuseum used to get about one million visitors a year before closing and now gets more than two million a year. Making the collection available online has generated publicity and acts as a form of marketing. The Creative Commons mark encourages reuse as well. When the image is found on protest leaflets, milk cartons, and children's toys, people also see what museum the image comes from and this increases the museum's visibility.

In 2011 the Rijksmuseum received €1 million from the Dutch lottery to create a new web presence that would be different from any other museum's. In addition to redesigning their main website to be mobile friendly and responsive to devices like the iPad, the Rijksmuseum also created the Rijksstudio, where users and artists could use and do various things with the Rijksmuseum collection.[2]

The Rijksstudio gives users access to over two hundred thousand high-quality digital representations of masterworks from the collection. Users can zoom in to any work and even clip small parts of images they like. Rijksstudio is a bit like Pinterest. You can "like" works and compile your personal favorites, and you can share them with friends or download them free of charge. All the images in the Rijksstudio are copyright and royalty free, and users are encouraged to use them as they like, for private or even commercial purposes.

Users have created over 276,000 Rijksstudios, generating their own themed virtual exhibitions on a wide variety of topics ranging from tapestries to ugly babies and birds. Sets of images have also been created for educational purposes including use for school exams.

RIJKSMUSEUM IMAGES ARE NOW USED IN THOUSANDS OF WIKIPEDIA ARTICLES, RECEIVING TEN TO ELEVEN MILLION VIEWS PER MONTH EXTENDING REACH FAR BEYOND THE SCOPE OF THEIR OWN WEBSITE.

Some contemporary artists who have works in the Rijksmuseum collection contacted them to ask why their works were not included in the Rijksstudio. The answer was that contemporary artists' works are still bound by copyright. The Rijksmuseum does encourage contemporary artists to use a Creative Commons license for their works, usually a CC BY-SA license (Attribution-ShareAlike), or a CC BY-NC (Attribution-NonCommercial) if they want to preclude commercial use. That way, their works can be made available to the public, but within limits the artists have specified.

The Rijksmuseum believes that art stimulates entrepreneurial activity. The line between creative and commercial can be blurry. As Lizzy says, even Rembrandt was commercial, making his livelihood from selling his paintings. The Rijksmuseum encourages entrepreneurial commercial use of the images in Rijksstudio. They've even partnered with the DIY marketplace Etsy to inspire people to sell their creations. One great example you can find on Etsy is a kimono designed by Angie Johnson, who used an image of an elaborate cabinet along with an oil painting by Jan Asselijn called *The Threatened Swan*.[3]

In 2013 the Rijksmuseum organized their first high-profile design competition, known as the Rijksstudio Award.[4] With the call to action Make Your Own Masterpiece, the competition invites the public to use Rijksstudio images to

make new creative designs. A jury of renowned designers and curators selects ten finalists and three winners. The final award comes with a prize of €10,000. The second edition in 2015 attracted a staggering 892 top-class entries. Some award winners end up with their work sold through the Rijksmuseum store, such as the 2014 entry featuring makeup based on a specific color scheme of a work of art.[5] The Rijksmuseum has been thrilled with the results. Entries range from the fun to the weird to the inspirational. The third international edition of the Rijksstudio Award started in September 2016.

For the next iteration of the Rijksstudio, the Rijksmuseum is considering an upload tool, for people to upload their own works of art, and enhanced social elements so users can interact with each other more.

Going with a more open business model generated lots of publicity for the Rijksmuseum. They were one of the first museums to open up their collection (that is, give free access) with high-quality images. This strategy, along with the many improvements to the Rijksmuseum's website, dramatically increased visits to their website from thirty-five thousand visits per month to three hundred thousand.

The Rijksmuseum has been experimenting with other ways to invite the public to look at and interact with their collection. On an international day celebrating animals, they ran a successful bird-themed event. The museum put together a showing of two thousand works that featured birds and invited bird-watchers to identify the birds depicted. Lizzy notes that while museum curators know a lot about the works in their collections, they may not know about certain details in the paintings such as bird species. Over eight hundred different birds were identified, including a specific species of crane bird that was unknown to the scientific community at the time of the painting.

For the Rijksmuseum, adopting an open business model was scary. They came up with many worst-case scenarios, imagining all kinds of awful things people might do with the museum's works. But Lizzy says those fears did not come true because "ninety-nine percent of people have respect for great art." Many museums think they can make a lot of money by selling things related to their collection. But in Lizzy's experience, museums are usually bad at selling things, and sometimes efforts to generate a small amount of money block something much bigger—the real value that the collection has. For Lizzy, clinging to small amounts of revenue is being penny-wise but pound-foolish. For the Rijksmuseum, a key lesson has been to never lose sight of its vision for the collection. Allowing access to and use of their collection has generated great promotional value—far more than the previous practice of charging fees for access and use. Lizzy sums up their experience: "Give away; get something in return. Generosity makes people happy to join you and help out."

Web links

1 www.europeana.eu/portal/en
2 www.rijksmuseum.nl/en/rijksstudio
3 www.etsy.com/ca/listing/175696771/fringe-kimono-silk-kimono-kimono-robe
4 www.rijksmuseum.nl/en/rijksstudio-award; the 2014 award: www.rijksmuseum.nl/en/rijksstudio-award-2014; the 2015 award: www.rijksmuseum.nl/en/rijksstudio-award-2015
5 www.rijksmuseum.nl/nl/rijksstudio/142328--nominees-rijksstudio-award/creaties/ba595afe-452d-46bd-9c8c-48dcbdd7f0a4

SHAREABLE

Shareable is an online magazine about sharing. Founded in 2009 in the U.S.

www.shareable.net

Revenue model: grant funding, crowdfunding (project-based), donations, sponsorships

Interview date: February 24, 2016
Interviewee: Neal Gorenflo, cofounder and executive editor

Profile written by Sarah Hinchliff Pearson

In 2013, Shareable faced an impasse. The nonprofit online publication had helped start a sharing movement four years prior, but over time, they watched one part of the movement stray from its ideals. As giants like Uber and Airbnb gained ground, attention began to center on the "sharing economy" we know now—profit-driven, transactional, and loaded with venture-capital money. Leaders of corporate start-ups in this domain invited Shareable to advocate for them. The magazine faced a choice: ride the wave or stand on principle.

As an organization, Shareable decided to draw a line in the sand. In 2013, the cofounder and executive editor Neal Gorenflo wrote an opinion piece in the *PandoDaily* that charted Shareable's new critical stance on the Silicon Valley version of the sharing economy, while contrasting it with aspects of the real sharing economy like open-source software, participatory budgeting (where citizens decide how a public budget is spent), cooperatives, and more. He wrote, "It's not so much that collaborative consumption is dead, it's more that it risks dying as it gets absorbed by the 'Borg.'"

Neal said their public critique of the corporate sharing economy defined what Shareable was and is. He does not think the magazine would still be around had they chosen differently. "We would have gotten another type of audience, but it would have spelled the end of us," he said. "We are a small, mission-driven organization. We would never have been able to weather the criticism that Airbnb and Uber are getting now."

Interestingly, impassioned supporters are only a small sliver of Shareable's total audience. Most are casual readers who come across a Shareable story because it happens to align with a project or interest they have.

But choosing principles over the possibility of riding the coattails of the major corporate players in the sharing space saved Shareable's credibility. Although they became detached from the corporate sharing economy, the online magazine became the voice of the "real sharing economy" and continued to grow their audience.

Shareable is a magazine, but the content they publish is a means to furthering their role as a leader and catalyst of a movement. Shareable became a leader in the movement in 2009. "At that time, there was a sharing movement bubbling beneath the surface, but no one was connecting the dots," Neal said. "We decided to step into that space and take on that role." The small team behind the nonprofit publication truly believed sharing could be central to solving some of the major problems human beings face—resource inequality, social isolation, and global warming.

They have worked hard to find ways to tell stories that show different metrics for success. "We wanted to change the notion of what constitutes the good life," Neal said. While they started out with a very broad focus on sharing generally, today they emphasize stories about the physical commons like "sharing cities" (i.e., urban areas managed in a sustainable, cooperative way), as well as digital platforms that are run democratically. They particularly focus on how-to content that help their readers make changes in their own lives and communities.

More than half of Shareable's stories are written by paid journalists that are contracted by the magazine. "Particularly in content areas that are a priority for us, we really want to go deep and control the quality," Neal said. The rest of the content is either contributed by guest writers, often for free, or written by other publications from their network of content publishers. Shareable is a member of the Post Growth Alliance, which facilitates the sharing of content and audiences among a large and growing group of mostly nonprofits. Each organization gets a chance to present stories to the group, and the organizations can use and promote each other's stories. Much of the content created by the network is licensed with Creative Commons.

All of Shareable's original content is published under the Attribution license (CC BY), meaning it can be used for any purpose as long as credit is given to Shareable. Creative Commons licensing is aligned with Shareable's vision, mission, and identity. That alone explains the organization's embrace of the licenses for their content, but Neal also believes CC licensing helps them increase their reach. "By using CC licensing," he said, "we realized we could reach far more people through a formal and informal network of republishers or affiliates. That has definitely been the case. It's hard for us to measure the reach of other media properties, but most of the outlets who republish our work have much bigger audiences than we do."

In addition to their regular news and commentary online, Shareable has also experimented with book publishing. In 2012, they worked with a traditional publisher to release *Share or Die: Voices of the Get Lost Generation in an Age of Crisis*. The CC-licensed book was available in print form for purchase or online for free. To this day, the book—along with their CC-licensed guide *Policies for Shareable Cities*—are two of the biggest generators of traffic on their website.

In 2016, Shareable self-published a book of curated Shareable stories called *How to: Share, Save Money and Have Fun*. The book was available for sale, but a PDF version of the book was available for free. Shareable plans to offer the book in upcoming fund-raising campaigns.

This recent book is one of many fund-raising experiments Shareable has conducted in recent years. Currently, Shareable is primarily funded by grants from foundations, but they are actively moving toward a more diversified model. They have organizational sponsors and are working to expand their base of individual donors. Ideally, they will eventually be a hundred percent funded by their audience. Neal

believes being fully community-supported will better represent their vision of the world.

For Shareable, success is very much about their impact on the world. This is true for Neal, but also for everyone who works for Shareable. “We attract passionate people,” Neal said. At times, that means employees work so hard they burn out. Neal tries to stress to the Shareable team that another part of success is having fun and taking care of yourself while you do something you love. “A central part of human beings is that we long to be on a great adventure with people we love,” he said. “We are a species who look over the horizon and imagine and create new worlds, but we also seek the comfort of hearth and home.”

In 2013, Shareable ran its first crowdfunding campaign to launch their Sharing Cities Network. Neal said at first they were on pace to fail spectacularly. They called in their advisers in a panic and asked for help. The advice they received was simple—“Sit your ass in a chair and start making calls.” That’s exactly what they did, and they ended up reaching their $50,000 goal. Neal said the campaign helped them reach new people, but the vast majority of backers were people in their existing base.

For Neal, this symbolized how so much of success comes down to relationships. Over time, Shareable has invested time and energy into the relationships they have forged with their readers and supporters. They have also invested resources into building relationships *between* their readers and supporters.

Shareable began hosting events in 2010. These events were designed to bring the sharing community together. But over time they realized they could reach far more people if they helped their readers to host their own events. “If we wanted to go big on a conference, there was a huge risk and huge staffing needs, plus only a fraction of our community could travel to the event,” Neal said. Enabling others to create their own events around the globe allowed them to scale up their work more effectively and reach far more people. Shareable has catalyzed three hundred different events reaching over twenty thousand people since implementing this strategy three years ago. Going forward, Shareable is focusing the network on creating and distributing content meant to spur local action. For instance, Shareable will publish a new CC-licensed book in 2017 filled with ideas for their network to implement.

Neal says Shareable stumbled upon this strategy, but it seems to perfectly encapsulate just how the commons is supposed to work. Rather than a one-size-fits-all approach, Shareable puts the tools out there for people take the ideas and adapt them to their own communities.

SIYAVULA

Siyavula is a for-profit educational-technology company that creates textbooks and integrated learning experiences. Founded in 2012 in South Africa.

www.siyavula.com

Revenue model: charging for custom services, sponsorships

Interview date: April 5, 2016
Interviewee: Mark Horner, CEO

Profile written by Paul Stacey

Openness is a key principle for Siyavula. They believe that every learner and teacher should have access to high-quality educational resources, as this forms the basis for long-term growth and development. Siyavula has been a pioneer in creating high-quality open textbooks on mathematics and science subjects for grades 4 to 12 in South Africa.

In terms of creating an open business model that involves Creative Commons, Siyavula—and its founder, Mark Horner—have been around the block a few times. Siyavula has significantly shifted directions and strategies to survive and prosper. Mark says it's been very organic.

It all started in 2002, when Mark and several other colleagues at the University of Cape Town in South Africa founded the Free High School Science Texts project. Most students in South Africa high schools didn't have access to high-quality, comprehensive science and math textbooks, so Mark and his colleagues set out to write them and make them freely available.

As physicists, Mark and his colleagues were advocates of open-source software. To make the books open and free, they adopted the Free Software Foundation's GNU Free Documentation License.[1] They chose LaTeX, a typesetting program used to publish scientific documents, to author the books. Over a period of five years, the Free High School Science Texts project produced math and physical-science textbooks for grades 10 to 12.

In 2007, the Shuttleworth Foundation offered funding support to make the textbooks available for trial use at more schools. Surveys before and after the textbooks were adopted showed there were no substantial criticisms of the textbooks' pedagogical content. This pleased both the authors and Shuttleworth; Mark remains incredibly proud of this accomplishment.

But the development of new textbooks froze at this stage. Mark shifted his focus to rural schools, which didn't have textbooks at all, and looked into the printing and distribution options. A few sponsors came on board but not enough to meet the need.

In 2007, Shuttleworth and the Open Society Institute convened a group of open-education activists for a small but lively meeting in Cape Town. One result was the Cape Town Open Education Declaration, a statement of principles, strategies, and commitment to help the open-education movement grow.[2] Shuttleworth also invited Mark to run a project writing open content for all subjects for K–12 in English. That project became Siyavula.

They wrote six original textbooks. A small publishing company offered Shuttleworth the option to buy out the publisher's existing K–9 content for every subject in South African schools in both English and Afrikaans. A deal was struck, and all the acquired content was licensed with Creative Commons, significantly expanding the collection beyond the six original books.

Mark wanted to build out the remaining curricula collaboratively through communities of practice—that is, with fellow educators and writers. Although sharing is fundamental to teaching, there can be a few challenges when you create educational resources collectively. One concern is legal. It is standard practice in education to copy diagrams and snippets of text, but of course this doesn't always comply with copyright law. Another concern is transparency. Sharing what you've authored means everyone can see it and opens you up to criticism. To alleviate these concerns, Mark adopted a team-based approach to authoring and insisted the curricula be based entirely on resources with Creative Commons licenses, thereby ensuring they were safe to share and free from legal repercussions.

Not only did Mark want the resources to be shareable, he wanted all teachers to be able to remix and edit the content. Mark and his team had to come up with an open editable format and provide tools for editing. They ended up putting all the books they'd acquired and authored on a platform called Connexions.[3] Siyavula trained many teachers to use Connexions, but it proved to be too complex and the textbooks were rarely edited.

Then the Shuttleworth Foundation decided to completely restructure its work as a foundation into a fellowship model (for reasons completely unrelated to Siyavula). As part of that transition in 2009–10, Mark inherited Siyavula as an independent entity and took ownership over it as a Shuttleworth fellow.

Mark and his team experimented with several different strategies. They tried creating an authoring and hosting platform called Full Marks so that teachers could share assessment items. They tried creating a service called Open Press, where teachers could ask for open educational resources to be aggregated into a package and printed for them. These services never really panned out.

Then the South African government approached Siyavula with an interest in printing out the original six Free High School Science Texts (math and physical-science textbooks for grades 10 to 12) for all high school students in South Africa. Although at this point Siyavula was a bit discouraged by open educational resources, they saw this as a big opportunity.

They began to conceive of the six books as having massive marketing potential for Siyavula. Printing Siyavula books for every kid in South Africa would give their brand huge exposure and could drive vast amounts of traffic to their website. In addition to print books, Si-

USING SIYAVULA BOOKS GENERATED HUGE SAVINGS FOR THE GOVERNMENT.

yavula could also make the books available on their website, making it possible for learners to access them using any device—computer, tablet, or mobile phone.

Mark and his team began imagining what they could develop beyond what was in the textbooks as a service they charge for. One key thing you can't do well in a printed textbook is demonstrate solutions. Typically, a one-line answer is given at the end of the book but nothing on the process for arriving at that solution. Mark and his team developed practice items and detailed solutions, giving learners plenty of opportunity to test out what they've learned. Furthermore, an algorithm could adapt these practice items to the individual needs of each learner. They called this service Intelligent Practice and embedded links to it in the open textbooks.

The costs for using Intelligent Practice were set very low, making it accessible even to those with limited financial means. Siyavula was going for large volumes and wide-scale use rather than an expensive product targeting only the high end of the market.

The government distributed the books to 1.5 million students, but there was an unexpected wrinkle: the books were delivered late. Rather than wait, schools who could afford it provided students with a different textbook. The Siyavula books were eventually distributed, but with well-off schools mainly using a different book, the primary market for Siyavula's Intelligent Practice service inadvertently became low-income learners.

Siyavula's site did see a dramatic increase in traffic. They got five hundred thousand visitors per month to their math site and the same number to their science site. Two-fifths of the traffic was reading on a "feature phone" (a nonsmartphone with no apps). People on basic phones were reading math and science on a two-inch screen at all hours of the day. To Mark, it was quite amazing and spoke to a need they were servicing.

At first, the Intelligent Practice services could only be paid using a credit card. This proved problematic, especially for those in the low-income demographic, as credit cards were not prevalent. Mark says Siyavula got a harsh business-model lesson early on. As he describes it, it's not just about product, but how you sell it, who the market is, what the price is, and what the barriers to entry are.

Mark describes this as the first version of Siyavula's business model: open textbooks serving as marketing material and driving traffic to your site, where you can offer a related service and convert some people into a paid customer.

For Mark a key decision for Siyavula's business was to focus on how they can add value on top of their basic service. They'll charge only if they are adding unique value. The actual content of the textbook isn't unique at all, so Siyavula sees no value in locking it down and charging for it. Mark contrasts this with traditional publishers who charge over and over again for the same content without adding value.

Version two of Siyavula's business model was a big, ambitious idea—scale up. They also decided to sell the Intelligent Practice service to schools directly. Schools can subscribe on a per-student, per-subject basis. A single subscription gives a learner access to a single subject, including practice content from every grade available for that subject. Lower subscription rates are provided when there are over two hundred students, and big schools have a price cap. A 40 percent discount is offered to schools where both the science and math departments subscribe.

Teachers get a dashboard that allows them to monitor the progress of an entire class or view an individual learner's results. They can see the questions that learners are working on, identify areas of difficulty, and be more strategic in their teaching. Students also have their own personalized dashboard, where they can view the sections they've practiced, how many points they've earned, and how their performance is improving.

Based on the success of this effort, Siyavula decided to substantially increase the production of open educational resources so they could provide the Intelligent Practice service for a wider range of books. Grades 10 to 12 math and science books were reworked each year, and new books created for grades 4 to 6 and later grades 7 to 9.

In partnership with, and sponsored by, the Sasol Inzalo Foundation, Siyavula produced a series of natural sciences and technology workbooks for grades 4 to 6 called Thunderbolt Kids that uses a fun comic-book style.[4] It's a complete curriculum that also comes with teacher's guides and other resources.

Through this experience, Siyavula learned they could get sponsors to help fund openly licensed textbooks. It helped that Siyavula had by this time nailed the production model. It cost roughly $150,000 to produce a book in two languages. Sponsors liked the social-benefit aspect of textbooks unlocked via a Creative Commons license. They also liked the exposure their brand got. For roughly $150,000, their logo would be visible on books distributed to over one million students.

The Siyavula books that are reviewed, approved, and branded by the government are freely and openly available on Siyavula's website under an Attribution-NoDerivs license (CC BY-ND) —NoDerivs means that these books cannot be modified. Non-government-branded books are available under an Attribution license (CC BY), allowing others to modify and redistribute the books.

Although the South African government paid to print and distribute hard copies of the books to schoolkids, Siyavula itself received no funding from the government. Siyavula initially tried to convince the government to provide them with five rand per book (about US35¢). With those funds, Mark says that Siyavula could have run its entire operation, built a community-based model for producing more books, and provide Intelligent Practice for free to every child in the country. But after a lengthy negotiation, the government said no.

Using Siyavula books generated huge savings for the government. Providing students with a traditionally published grade 12 science or math textbook costs around 250 rand per book (about US$18). Providing the Siyavula version cost around 36 rand (about $2.60), a savings of over 200 rand per book. But none of those savings were passed on to Siyavula. In retrospect, Mark thinks this may have turned out in their favor as it allowed them to remain independent from the government.

Just as Siyavula was planning to scale up the production of open textbooks even more, the South African government changed its textbook policy. To save costs, the government declared there would be only *one* authorized textbook for each grade and each subject. There was no guarantee that Siyavula's would be chosen. This scared away potential sponsors.

Rather than producing more textbooks, Siyavula focused on improving its Intelligent Practice technology for its existing books. Mark calls this version three of Siyavula's business model—focusing on the technology that provides the revenue-generating service and generating more users of this service. Version three got a significant boost in 2014 with an investment by the Omidyar Network (the philanthropic venture started by eBay founder Pierre Omidyar and his spouse), and continues to be the model Siyavula uses today.

Mark says sales are way up, and they are really nailing Intelligent Practice. Schools continue to use their open textbooks. The government-announced policy that there would be only one textbook per subject turned out to be highly contentious and is in limbo.

Siyavula is exploring a range of enhancements to their business model. These include charging a small amount for assessment services provided over the phone, diversifying their market to all English-speaking countries in Africa, and setting up a consortium that

makes Intelligent Practice free to all kids by selling the nonpersonal data Intelligent Practice collects.

Siyavula is a for-profit business but one with a social mission. Their shareholders' agreement lists lots of requirements around openness for Siyavula, including stipulations that content always be put under an open license and that they can't charge for something that people volunteered to do for them. They believe each individual should have access to the resources and support they need to achieve the education they deserve. Having educational resources openly licensed with Creative Commons means they can fulfill their social mission, on top of which they can build revenue-generating services to sustain the ongoing operation of Siyavula. In terms of open business models, Mark and Siyavula may have been around the block a few times, but both he and the company are stronger for it.

Web links

1 www.gnu.org/licenses/fdl
2 www.capetowndeclaration.org
3 cnx.org
4 www.siyavula.com/products-primary-school.html

BUSINESS 2.0

AND THIS TIME IT'S *Personal*

SPARKFUN

SparkFun is an online electronics retailer specializing in open hardware. Founded in 2003 in the U.S.

www.sparkfun.com

Revenue model: charging for physical copies (electronics sales)

Interview date: February 29, 2016
Interviewee: Nathan Seidle, founder

Profile written by Sarah Hinchliff Pearson

SparkFun founder and former CEO Nathan Seidle has a picture of himself holding up a clone of a SparkFun product in an electronics market in China, with a huge grin on his face. He was traveling in China when he came across their LilyPad wearable technology being made by someone else. His reaction was glee.

"Being copied is the greatest earmark of flattery and success," Nathan said. "I thought it was so cool that they were selling to a market we were never going to get access to otherwise. It was evidence of our impact on the world."

This worldview runs through everything SparkFun does. SparkFun is an electronics manufacturer. The company sells its products directly to the public online, and it bundles them with educational tools to sell to schools and teachers. SparkFun applies Creative Commons licenses to all of its schematics, images, tutorial content, and curricula, so anyone can make their products on their own. Being copied is part of the design.

Nathan believes open licensing is good for the world. "It touches on our natural human instinct to share," he said. But he also strongly believes it makes SparkFun better at what they do. They encourage copying, and their products are copied at a very fast rate, often within ten to twelve weeks of release. This forces the company to compete on something other than product design, or what most commonly consider their intellectual property.

"We compete on business principles," Nathan said. "Claiming your territory with intellectual property allows you to get comfy and rest on your laurels. It gives you a safety net. We took away that safety net."

The result is an intense company-wide focus on product development and improvement. "Our products are so much better than they were five years ago," Nathan said. "We

used to just sell products. Now it's a product plus a video, a seventeen-page hookup guide, and example firmware on three different platforms to get you up and running faster. We have gotten better because we had to in order to compete. As painful as it is for us, it's better for the customers."

SparkFun parts are available on eBay for lower prices. But people come directly to SparkFun because SparkFun makes their lives easier. The example code works; there is a service number to call; they ship replacement parts the day they get a service call. They invest heavily in service and support. "I don't believe businesses should be competing with IP [intellectual property] barriers," Nathan said. "*This* is the stuff they should be competing on."

SparkFun's company history began in Nathan's college dorm room. He spent a lot of time experimenting with and building electronics, and he realized there was a void in the market. "If you wanted to place an order for something," he said, "you first had to search far and wide to find it, and then you had to call or fax someone." In 2003, during his third year of college, he registered sparkfun.com and started reselling products out of his bedroom. After he graduated, he started making and selling his own products.

Once he started designing his own products, he began putting the software and schematics online to help with technical support. After doing some research on licensing options, he chose Creative Commons licenses because he was drawn to the "human-readable deeds" that explain the licensing terms in simple terms. SparkFun still uses CC licenses for all of the schematics and firmware for the products they create.

The company has grown from a solo project to a corporation with 140 employees. In 2015, SparkFun earned $33 million in revenue. Selling components and widgets to hobbyists, professionals, and artists remains a major part of SparkFun's business. They sell their own prod-

BEING COPIED IS THE GREATEST EARMARK OF FLATTERY AND SUCCESS.

ucts, but they also partner with Arduino (also profiled in this book) by manufacturing boards for resale using Arduino's brand.

SparkFun also has an educational department dedicated to creating a hands-on curriculum to teach students about electronics using prototyping parts. Because SparkFun has always been dedicated to enabling others to re-create and fix their products on their own, the more recent focus on introducing young people to technology is a natural extension of their core business.

"We have the burden and opportunity to educate the next generation of technical citizens," Nathan said. "Our goal is to affect the lives of three hundred and fifty thousand high school students by 2020."

The Creative Commons license underlying all of SparkFun's products is central to this mission. The license not only signals a willingness to share, but it also expresses a desire for others to get in and tinker with their products, both to learn and to make their products better. SparkFun uses the Attribution-ShareAlike license (CC BY-SA), which is a "copyleft" license that allows people to do anything with the content as long as they provide credit and make any adaptations available under the same licensing terms.

From the beginning, Nathan has tried to create a work environment at SparkFun that he himself would want to work in. The result is what appears to be a pretty fun workplace. The U.S. company is based in Boulder, Colorado. They have an eighty-thousand-square-foot facility (approximately seventy-four-hundred square meters), where they design and manufacture their products. They offer public tours of the

space several times a week, and they open their doors to the public for a competition once a year.

The public event, called the Autonomous Vehicle Competition, brings in a thousand to two thousand customers and other technology enthusiasts from around the area to race their own self-created bots against each other, participate in training workshops, and socialize. From a business perspective, Nathan says it's a terrible idea. But they don't hold the event for business reasons. "The reason we do it is because I get to travel and have interactions with our customers all the time, but most of our employees don't," he said. "This event gives our employees the opportunity to get face-to-face contact with our customers." The event infuses their work with a human element, which makes it more meaningful.

Nathan has worked hard to imbue a deeper meaning into the work SparkFun does. The company is, of course, focused on being fiscally responsible, but they are ultimately driven by something other than money. "Profit is not the goal; it is the outcome of a well-executed plan," Nathan said. "We focus on having a bigger impact on the world." Nathan believes they get some of the brightest and most amazing employees because they aren't singularly focused on the bottom line.

The company is committed to transparency and shares all of its financials with its employees. They also generally strive to avoid being another soulless corporation. They actively try to reveal the humans behind the company, and they work to ensure people coming to their site don't find only unchanging content.

SparkFun's customer base is largely made up of industrious electronics enthusiasts. They have customers who are regularly involved in the company's customer support, independently responding to questions in forums and product-comment sections. Customers also bring product ideas to the company. SparkFun regularly sifts through suggestions from customers and tries to build on them where they can. "From the beginning, we have been listening to the community," Nathan said. "Customers would identify a pain point, and we would design something to address it."

However, this sort of customer engagement does not always translate to people actively contributing to SparkFun's projects. The company has a public repository of software code for each of its devices online. On a particularly active project, there will only be about two dozen people contributing significant improvements. The vast majority of projects are relatively untouched by the public. "There is a theory that if you open-source it, they will come," Nathan said. "That's not really true."

Rather than focusing on cocreation with their customers, SparkFun instead focuses on enabling people to copy, tinker, and improve products on their own. They heavily invest in tutorials and other material designed to help people understand how the products work so they can fix and improve things independently. "What gives me joy is when people take open-source layouts and then build their own circuit boards from our designs," Nathan said.

Obviously, opening up the design of their products is a necessary step if their goal is to empower the public. Nathan also firmly believes it makes them more money because it requires them to focus on how to provide maximum value. Rather than designing a new product and protecting it in order to extract as much money as possible from it, they release the keys necessary for others to build it themselves and then spend company time and resources on innovation and service. From a short-term perspective, SparkFun may lose a few dollars when others copy their products. But in the long run, it makes them a more nimble, innovative business. In other words, it makes them the kind of company they set out to be.

TEACHAIDS

TeachAIDS is a nonprofit that creates educational materials designed to teach people around the world about HIV and AIDS. Founded in 2005 in the U.S.

teachaids.org

Revenue model: sponsorships

Interview date: March 24, 2016
Interviewees: Piya Sorcar, the CEO, and Shuman Ghosemajumder, the chair

Profile written by Sarah Hinchliff Pearson

TeachAIDS is an unconventional media company with a conventional revenue model. Like most media companies, they are subsidized by advertising. Corporations pay to have their logos appear on the educational materials TeachAIDS distributes.

But unlike most media companies, TeachAIDS is a nonprofit organization with a purely social mission. TeachAIDS is dedicated to educating the global population about HIV and AIDS, particularly in parts of the world where education efforts have been historically unsuccessful. Their educational content is conveyed through interactive software, using methods based on the latest research about how people learn. TeachAIDS serves content in more than eighty countries around the world. In each instance, the content is translated to the local language and adjusted to conform to local norms and customs. All content is free and made available under a Creative Commons license.

TeachAIDS is a labor of love for founder and CEO Piya Sorcar, who earns a salary of one dollar per year from the nonprofit. The project grew out of research she was doing while pursuing her doctorate at Stanford University. She was reading reports about India, noting it would be the next hot zone of people living with HIV. Despite international and national entities pouring in hundreds of millions of dollars on HIV-prevention efforts, the reports showed knowledge levels were still low. People were unaware of whether the virus could be transmitted through coughing and sneezing, for instance. Supported by an interdisciplinary team of experts at Stanford, Piya conducted similar studies, which corroborated

the previous research. They found that the primary cause of the limited understanding was that HIV, and issues relating to it, were often considered too taboo to discuss comprehensively. The other major problem was that most of the education on this topic was being taught through television advertising, billboards, and other mass-media campaigns, which meant people were only receiving bits and pieces of information.

In late 2005, Piya and her team used research-based design to create new educational materials and worked with local partners in India to help distribute them. As soon as the animated software was posted online, Piya's team started receiving requests from individuals and governments who were interested in bringing this model to more countries. "We realized fairly quickly that educating large populations about a topic that was considered taboo would be challenging. We began by identifying optimal local partners and worked toward creating an effective, culturally appropriate education," Piya said.

Very shortly after the initial release, Piya's team decided to spin the endeavor into an independent nonprofit out of Stanford University. They also decided to use Creative Commons licenses on the materials.

Given their educational mission, TeachAIDS had an obvious interest in seeing the materials as widely shared as possible. But they also needed to preserve the integrity of the medical information in the content. They chose the Attribution-NonCommercial-NoDerivs license (CC BY-NC-ND), which essentially gives the public the right to distribute only verbatim copies of the content, and for noncommercial purposes. "We wanted attribution for TeachAIDS, and we couldn't stand by derivatives without vetting them," the cofounder and chair Shuman Ghosemajumder said. "It was almost a no-brainer to go with a CC license because it was a plug-and-play solution to this exact problem. It has allowed us to scale our materials safely and quickly worldwide while preserving our content and protecting us at the same time."

Choosing a license that does not allow adaptation of the content was an outgrowth of the careful precision with which TeachAIDS crafts their content. The organization invests heavily in research and testing to determine the best method of conveying the information. "Creating high-quality content is what matters most to us," Piya said. "Research drives everything we do."

One important finding was that people accept the message best when it comes from familiar voices they trust and admire. To achieve this, TeachAIDS researches cultural icons that would best resonate with their target audiences and recruits them to donate their likenesses and voices for use in the animated software. The celebrities involved vary for each localized version of the materials.

Localization is probably the single-most important aspect of the way TeachAIDS creates its content. While each regional version builds from the same core scientific materials, they pour a lot of resources into customizing the content for a particular population. Because they use a CC license that does not allow the public to adapt the content, TeachAIDS retains careful control over the localization process. The content is translated into the local language, but there are also changes in substance and format to reflect cultural differences. This process results in minor changes, like choosing different idioms based on the local language, and significant changes, like creating gendered versions for places where people are more likely to accept information from someone of the same gender.

The localization process relies heavily on volunteers. Their volunteer base is deeply committed to the cause, and the organization has had better luck controlling the quality of the materials when they tap volunteers instead of using paid translators. For quality control, TeachAIDS has three separate volunteer teams translate the materials from English to the local language and customize the content based on local customs and norms. Those three versions are then analyzed and combined into a single master translation. TeachAIDS has ad-

ditional teams of volunteers then translate that version back into English to see how well it lines up with the original materials. They repeat this process until they reach a translated version that meets their standards. For the Tibetan version, they went through this cycle eleven times.

TeachAIDS employs full-time employees, contractors, and volunteers, all in different capacities and organizational configurations. They are careful to use people from diverse backgrounds to create the materials, including teachers, students, and doctors, as well as individuals experienced in working in the NGO space. This diversity and breadth of knowledge help ensure their materials resonate with people from all walks of life. Additionally, TeachAIDS works closely with film writers and directors to help keep the concepts entertaining and easy to understand. The inclusive, but highly controlled, creative process is undertaken entirely by people who are specifically brought on to help with a particular project, rather than ongoing staff. The final product they create is designed to require zero training for people to implement in practice. “In our research, we found we can’t depend on people passing on the information correctly, even if they have the best of intentions,” Piya said. “We need materials where you can push play and they will work.”

Piya’s team was able to produce all of these versions over several years with a head count that never exceeded eight full-time employees. The organization is able to reduce costs by relying heavily on volunteers and in-kind donations. Nevertheless, the nonprofit needed a sustainable revenue model to subsidize content creation and physical distribution of the materials. Charging even a low price was simply not an option. “Educators from various nonprofits around the world were just creating their own materials using whatever they could find for free online,” Shuman said. “The only way to persuade them to use our highly effective model was to make it completely free.”

Like many content creators offering their work for free, they settled on advertising as a funding model. But they were extremely careful not to let the advertising compromise their credibility or undermine the heavy investment they put into creating quality content. Sponsors of the content have no ability to influence the substance of the content, and they cannot even create advertising content. Sponsors only get the right to have their logo appear before and after the educational content. All of the content remains branded as TeachAIDS.

TeachAIDS is careful not to seek funding to cover the costs of a specific project. Instead, sponsorships are structured as unrestricted donations to the nonprofit. This gives the nonprofit more stability, but even more importantly, it enables them to subsidize projects being localized for an area with no sponsors. “If we just created versions based on where we could get sponsorships, we would only have materials for wealthier countries,” Shuman said.

As of 2016, TeachAIDS has dozens of sponsors. “When we go into a new country, various companies hear about us and reach out to us,” Piya said. “We don’t have to do much to find or attract them.” They believe the sponsorships are easy to sell because they offer so much value to sponsors. TeachAIDS sponsorships give corporations the chance to reach new eyeballs with their brand, but at a much lower cost than other advertising channels. The audience for TeachAIDS content also tends to skew young, which is often a desirable demographic for brands. Unlike traditional advertising, the content is not time-sensitive, so an investment in a sponsorship can benefit a brand for many years to come.

Importantly, the value to corporate sponsors goes beyond commercial considerations. As a nonprofit with a clearly articulated social mission, corporate sponsorships are donations to a cause. “This is something companies can be proud of internally,” Shuman said. Some companies have even built public-

ity campaigns around the fact that they have sponsored these initiatives.

The core mission of TeachAIDS—ensuring global access to life-saving education—is at the root of everything the organization does. It underpins the work; it motivates the funders. The CC license on the materials they create furthers that mission, allowing them to safely and quickly scale their materials worldwide. “The Creative Commons license has been a game changer for TeachAIDS,” Piya said.

TRIBE OF NOISE

Tribe of Noise is a for-profit online music platform serving the film, TV, video, gaming, and in-store-media industries. Founded in 2008 in the Netherlands.

www.tribeofnoise.com

Revenue model: charging a transaction fee

Interview date: January 26, 2016
Interviewee: Hessel van Oorschot, cofounder

Profile written by Paul Stacey

In the early 2000s, Hessel van Oorschot was an entrepreneur running a business where he coached other midsize entrepreneurs how to create an online business. He also coauthored a number of workbooks for small- to medium-size enterprises to use to optimize their business for the Web. Through this early work, Hessel became familiar with the principles of open licensing, including the use of open-source software and Creative Commons.

In 2005, Hessel and Sandra Brandenburg launched a niche video-production initiative. Almost immediately, they ran into issues around finding and licensing music tracks. All they could find was standard, cold stock-music. They thought of looking up websites where you could license music directly from the musician without going through record labels or agents. But in 2005, the ability to directly license music from a rights holder was not readily available.

They hired two lawyers to investigate further, and while they uncovered five or six examples, Hessel found the business models lacking. The lawyers expressed interest in being their legal team should they decide to pursue this as an entrepreneurial opportunity. Hessel says, “When lawyers are interested in a venture like this, you might have something special.” So after some more research, in early 2008, Hessel and Sandra decided to build a platform.

Building a platform posed a real chicken-and-egg problem. The platform had to build an online community of music-rights holders and, at the same time, provide the community with information and ideas about how the new economy works. Community willingness to try new music business models requires a trust relationship.

In July 2008, Tribe of Noise opened its virtual doors with a couple hundred musicians willing to use the CC BY-SA license (Attribution-ShareAlike) for a limited part of their repertoire. The two entrepreneurs wanted to take the pain away for media makers who wanted to license music and solve the problems the two had personally experienced finding this music.

As they were growing the community, Hessel got a phone call from a company that made in-store music playlists asking if they had enough music licensed with Creative Commons that they could use. Stores need quality, good-listening music but not necessarily hits, a bit like a radio show without the DJ. This opened a new opportunity for Tribe of Noise. They started their In-store Music Service, using music (licensed with CC BY-SA) uploaded by the Tribe of Noise community of musicians.[1]

In most countries, artists, authors, and musicians join a collecting society that manages the licensing and helps collect the royalties. Copyright collecting societies in the European Union usually hold monopolies in their respective national markets. In addition, they require their members to transfer exclusive administration rights to them of all of their works. This complicates the picture for Tribe of Noise, who wants to represent artists, or at least a portion of their repertoire. Hessel and his legal team reached out to collecting societies, starting with those in the Netherlands. What would be the best legal way forward that would respect the wishes of composers and musicians who'd be interested in trying out new models like the In-store Music Service? Collecting societies at first were hesitant and said no, but Tribe of Noise persisted arguing that they primarily work with unknown artists and provide them exposure in parts of the world where they don't get airtime normally and a source of revenue—and this convinced them that it was OK. However, Hessel says, "We are still fighting for a good cause every single day."

Instead of building a large sales force, Tribe of Noise partnered with big organizations who have lots of clients and can act as a kind of Tribe of Noise reseller. The largest telecom network in the Netherlands, for example, sells Tribe's In-store Music Service subscriptions to their business clients, which include fashion retailers and fitness centers. They have a similar deal with the leading trade association representing hotels and restaurants in the country. Hessel hopes to "copy and paste" this service into other countries where collecting societies understand what you can do with Creative Commons. Outside of the Netherlands, early adoptions have happened in Scandinavia, Belgium, and the U.S.

Tribe of Noise doesn't pay the musicians up front; they get paid when their music ends up in Tribe of Noise's in-store music channels. The musicians' share is 42.5 percent. It's not uncommon in a traditional model for the artist to get only 5 to 10 percent, so a share of over 40 percent is a significantly better deal. Here's how they give an example on their website:

> A few of your songs [licensed with CC BY-SA], for example five in total, are selected for a bespoke in-store music channel broadcasting at a large retailer with 1,000 stores nationwide. In this case the overall playlist contains 350 songs so the musician's share is 5/350 = 1.43%. The license fee agreed with this retailer is US$12 per month per play-out. So if 42.5% is shared with the Tribe musicians in this playlist and your share is 1.43%, you end up with US$12 * 1000 stores * 0.425 * 0.0143 = US$73 per month.[2]

Tribe of Noise has another model that does not involve Creative Commons. In a survey with

members, most said they liked the exposure using Creative Commons gets them and the way it lets them reach out to others to share and remix. However, they had a bit of a mental struggle with Creative Commons licenses being perpetual. A lot of musicians have the mind-set that one day one of their songs may become an overnight hit. If that happened the CC BY-SA license would preclude them getting rich off the sale of that song.

Hessel's legal team took this feedback and created a second model and separate area of the platform called Tribe of Noise Pro. Songs uploaded to Tribe of Noise Pro aren't Creative Commons licensed; Tribe of Noise has instead created a "nonexclusive exploitation" contract, similar to a Creative Commons license but allowing musicians to opt out whenever they want. When you opt out, Tribe of Noise agrees to take your music off the Tribe of Noise platform within one to two months. This lets the musician reuse their song for a better deal.

Tribe of Noise Pro is primarily geared toward media makers who are looking for music. If they buy a license from this catalog, they don't have to state the name of the creator; they just license the song for a specific amount. This is a big plus for media makers. And musicians can pull their repertoire at any time. Hessel sees this as a more direct and clean deal.

Lots of Tribe of Noise musicians upload songs to both Tribe of Noise Pro and the community area of Tribe of Noises. There aren't that many artists who upload only to Tribe of Noise Pro, which has a smaller repertoire of music than the community area.

Hessel sees the two as complementary. Both are needed for the model to work. With a whole generation of musicians interested in the sharing economy, the community area of Tribe of Noise is where they can build trust, create exposure, and generate money. And after that, musicians may become more interested in exploring other models like Tribe of Noise Pro.

Every musician who joins Tribe of Noise gets their own home page and free unlimited Web space to upload as much of their own music as they like. Tribe of Noise is also a social network; fellow musicians and professionals can vote for, comment on, and like your music. Community managers interact with and support members, and music supervisors pick and choose from the uploaded songs for in-store play or to promote them to media producers. Members really like having people working for the platform who truly engage with them.

WITH A WHOLE GENERATION OF MUSICIANS INTERESTED IN THE SHARING ECONOMY, THE COMMUNITY AREA OF TRIBE OF NOISE IS WHERE THEY CAN BUILD TRUST, CREATE EXPOSURE, AND GENERATE MONEY.

Another way Tribe of Noise creates community and interest is with contests, which are organized in partnership with Tribe of Noise clients. The client specifies what they want, and any member can submit a song. Contests usually involve prizes, exposure, and money. In addition to building member engagement, contests help members learn how to work with clients: listening to them, understanding what they want, and creating a song to meet that need.

Tribe of Noise now has twenty-seven thousand members from 192 countries, and many are exploring do-it-yourself models for generating revenue. Some came from music labels and publishers, having gone through the traditional way of music licensing and now seeing if this new model makes sense for them. Others are young musicians, who grew up with a DIY mentality and see little reason to sign with a third party or hand over some of the control. Still a small but growing group of Tribe members are pursuing a hybrid model by licensing some of their songs under CC BY-SA and

opting in others with collecting societies like ASCAP or BMI.

It's not uncommon for performance-rights organizations, record labels, or music publishers to sign contracts with musicians based on exclusivity. Such an arrangement prevents those musicians from uploading their music to Tribe of Noise. In the United States, you can have a collecting society handle only some of your tracks, whereas in many countries in Europe, a collecting society prefers to represent your entire repertoire (although the European Commission is making some changes). Tribe of Noise deals with this issue all the time and gives you a warning whenever you upload a song. If collecting societies are willing to be open and flexible and do the most they can for their members, then they can consider organizations like Tribe of Noise as a nice add-on, generating more exposure and revenue for the musicians they represent. So far, Tribe of Noise has been able to make all this work without litigation.

For Hessel the key to Tribe of Noise's success is trust. The fact that Creative Commons licenses work the same way all over the world and have been translated into all languages really helps build that trust. Tribe of Noise believes in creating a model where they work together with musicians. They can only do that if they have a live and kicking community, with people who think that the Tribe of Noise team has their best interests in mind. Creative Commons makes it possible to create a new business model for music, a model that's based on trust.

Web links

1 www.instoremusicservice.com
2 www.tribeofnoise.com/info_instoremusic.php

WIKIMEDIA FOUNDATION

The Wikimedia Foundation is the nonprofit organization that hosts Wikipedia and its sister projects. Founded in 2003 in the U.S.

wikimediafoundation.org

Revenue model: donations

Interview date: December 18, 2015
Interviewees: Luis Villa, former Chief Officer of Community Engagement, and Stephen LaPorte, legal counsel

Profile written by Sarah Hinchliff Pearson

Nearly every person with an online presence knows Wikipedia.

In many ways, it is *the* preeminent open project: The online encyclopedia is created entirely by volunteers. Anyone in the world can edit the articles. All of the content is available for free to anyone online. All of the content is released under a Creative Commons license that enables people to reuse and adapt it for any purpose.

As of December 2016, there were more than forty-two million articles in the 295 language editions of the online encyclopedia, according to—what else?—the Wikipedia article about Wikipedia.

The Wikimedia Foundation is a U.S.-based nonprofit organization that owns the Wikipedia domain name and hosts the site, along with many other related sites like Wikidata and Wikimedia Commons. The foundation employs about two hundred and eighty people, who all work to support the projects it hosts. But the true heart of Wikipedia and its sister projects is its community. The numbers of people in the community are variable, but about seventy-five thousand volunteers edit and improve Wikipedia articles every month. Volunteers are organized in a variety of ways across the globe, including formal Wikimedia chapters (mostly national), groups focused on a particular theme, user groups, and many thousands who are not connected to a particular organization.

As Wikimedia legal counsel Stephen LaPorte told us, "There is a common saying that Wiki-

pedia works in practice but not in theory." While it undoubtedly has its challenges and flaws, Wikipedia and its sister projects are a striking testament to the power of human collaboration.

Because of its extraordinary breadth and scope, it does feel a bit like a unicorn. Indeed, there is nothing else like Wikipedia. Still, much of what makes the projects successful—community, transparency, a strong mission, trust—are consistent with what it takes to be successfully **Made with Creative Commons** more generally. With Wikipedia, everything just happens at an unprecedented scale.

The story of Wikipedia has been told many times. For our purposes, it is enough to know the experiment started in 2001 at a small scale, inspired by the crazy notion that perhaps a truly open, collaborative project could create something meaningful. At this point, Wikipedia is so ubiquitous and ingrained in our digital lives that the fact of its existence seems less remarkable. But outside of software, Wikipedia is perhaps the single most stunning example of successful community cocreation. Every day, seven thousand new articles are created on Wikipedia, and nearly fifteen thousand edits are made every hour.

The nature of the content the community creates is ideal for asynchronous cocreation. "An encyclopedia is something where incremental community improvement really works," Luis Villa, former Chief Officer of Community Engagement, told us. The rules and processes that govern cocreation on Wikipedia and its sister projects are all community-driven and vary by language edition. There are entire books written on the intricacies of their systems, but generally speaking, there are very few exceptions to the rule that anyone can edit any article, even without an account on their system. The extensive peer-review process includes elaborate systems to resolve disputes, methods for managing particularly controversial subject areas, talk pages explaining decisions, and much, much more.

The Wikimedia Foundation's decision to leave governance of the projects to the community is very deliberate. "We look at the things that the community can do well, and we want to let them do those things," Stephen told us. Instead, the foundation focuses its time and resources on what the community cannot do as effectively, like the software engineering that supports the technical infrastructure of the sites. In 2015-16, about half of the foundation's budget went to direct support for the Wikimedia sites.

Some of that is directed at servers and general IT support, but the foundation also invests a significant amount on architecture designed to help the site function as effectively as possible. "There is a constantly evolving system to keep the balance in place to avoid Wikipedia becoming the world's biggest graffiti wall," Luis said. Depending on how you measure it, somewhere between 90 to 98 percent of edits to Wikipedia are positive. Some portion of that success is attributable to the tools Wikimedia has in place to try to incentivize good actors. "The secret to having any healthy community is bringing back the right people," Luis said. "Vandals tend to get bored and go away. That is partially our model working, and partially just human nature." Most of the time, people want to do the right thing.

Wikipedia not only relies on good behavior within its community and on its sites, but also by everyone else once the content leaves Wikipedia. All of the text of Wikipedia is available under an Attribution-ShareAlike license (CC BY-SA), which means it can be used for any purpose and modified so long as credit is given and anything new is shared back with the public under the same license. In theory, that means anyone can copy the content and start a new Wikipedia. But as Stephen explained, "Being open has only made Wikipedia bigger and stronger. The desire to protect is not always what is best for everyone."

Of course, the primary reason no one has successfully co-opted Wikipedia is that copycat

efforts do not have the Wikipedia community to sustain what they do. Wikipedia is not simply a source of up-to-the-minute content on every given topic—it is also a global patchwork of humans working together in a million different ways, in a million different capacities, for a million different reasons. While many have tried to guess what makes Wikipedia work as well it does, the fact is there is no single explanation. “In a movement as large as ours, there is an incredible diversity of motivations,” Stephen said. For example, there is one editor of the English Wikipedia edition who has corrected a single grammatical error in articles more than forty-eight thousand times.[1]

Only a fraction of Wikipedia users are also editors. But editing is not the only way to contribute to Wikipedia. “Some donate text, some donate images, some donate financially,” Stephen told us. “They are all contributors.”

But the vast majority of us who use Wikipedia are not contributors; we are passive readers. The Wikimedia Foundation survives primarily on individual donations, with about $15 as the average. Because Wikipedia is one of the ten most popular websites in terms of total page views, donations from a small portion of that audience can translate into a lot of money. In the 2015-16 fiscal year, they received more than $77 million from more than five million donors.

The foundation has a fund-raising team that works year-round to raise money, but the bulk of their revenue comes in during the December campaign in Australia, Canada, Ireland, New Zealand, the United Kingdom, and the United States. They engage in extensive user testing and research to maximize the reach of their fund-raising campaigns. Their basic fund-raising message is simple: We provide our readers and the world immense value, so give back. Every little bit helps. With enough eyeballs, they are right.

The vision of the Wikimedia Foundation is a world in which every single human being can freely share in the sum of all knowledge. They work to realize this vision by empowering people around the globe to create educational content made freely available under an open license or in the public domain. Stephen and Luis said the mission, which is rooted in the same philosophy behind Creative Commons, drives everything the foundation does.

The philosophy behind the endeavor also enables the foundation to be financially sustainable. It instills trust in their readership, which is critical for a revenue strategy that relies on reader donations. It also instills trust in their community.

Any given edit on Wikipedia could be motivated by nearly an infinite number of reasons. But the social mission of the project is what binds the global community together. “Wikipedia is an example of how a mission can motivate an entire movement,” Stephen told us.

Of course, what results from that movement is one of the Internet’s great public resources. “The Internet has a lot of businesses and stores, but it is missing the digital equivalent of parks and open public spaces,” Stephen said. “Wikipedia has found a way to be that open public space.”

Web link

1 gimletmedia.com/episode/14-the-art-of-making-and-fixing-mistakes/

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